THOMSON MULTI MEDIA

Brandt FERGUSON SABA TELEFUNKEN THOMSON

TV

SERVICE MANUAL
DOCUMENTATION TECHNIQUE
TECHNISCHE DOKUMENTATION
DOCUMENTAZIONE TECNICA
DOCUMENTACION TECNICA

42WS90E
42WS90E2

Plasma

WARNING : *Before servicing this chassis please read the safety recommendations.*
ATTENTION : *Avant toute intervention sur ce châssis, lire les recommandations de sécurité.*
ACHTUNG : *Vor jedem Eingriff auf diesem Chassis, die Sicherheitsvorschriften lesen.*
ATTENZIONE : *Prima di intervenire sullo chassis, leggere le norme di sicurezza.*
IMPORTANTE : *Antes de cualquier intervención, leer las recomendaciones de seguridad.*

Code : 351 530 30 - 0301 / 00M - Wysius Print.

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Do not disconnect modules when they are energized!
Repairs on power supply section are to be carried out only with isolating transformer.

Ne pas retirer les modules lorsqu' ils sont sous tension. N'effectuer les travaux de maintenance sur la partie reliée au secteur (Switch Mode) qu'au travers d'un transformateur d'isolement.

Module nicht bei eingeschaltetem Gerät entfernen!
Servicearbeiten am Netzteil nur unter Verwendung eines Regeltrenntrafos durchführen.

Non scollegare le piastre quando sono alimentate!
Per le riparazioni sulla sezione alimentatore, utilizzare un trasformatore isolatore.

No desconectar los módulos cuando están activados. Las reparaciones en la sección de alimentación de energía deben ser ejecutadas solamente con un transformador de separación.

⚠ Indicates critical safety components, and identical components should be used for replacement. Only then can the operational safety be garanteed.

Le remplacement des éléments de sécurité (repérés avec le symbole ⚠) par des composants non homologués selon la Norme CEI 65 entraine la non-conformité de l'appareil. Dans ce cas, la responsabilité du fabricant n'est plus engagée.

Wenn Sicherheitsteile (mit dem Symbol ⚠ gekennzeichnet) nicht durch Original - Ersatzteile ersetzt werden, erlischt die Haftung des Herstellers.

La sostituzione dei componenti di sicurezza (evidenziati con il segno ⚠) con componenti non omologati secondo la norma CEI 65 comporta la non conformitá dell'apparecchio. In tal caso è "esclusa la responsabilità " del costruttore.

La sustitución de elementos de seguridad (marcados con el simbolo ⚠) por componentes no homologados segun la norma CEI 65, provoca la no conformidad del aparato. En ese caso, el fabricante cesa de ser responsable.

MEASUREMENT CONDITIONS - CONDITIONS DE MESURES - MESSBEDINGUNGEN CONDIZIONI DI MISURA - CONDICIONES DE MEDIDAS

RECEIVER :
On UHF,input level : 1 mV, bar test pattern :
- PAL, I standard, 100% white.

Via the scart socket, input level : 1 Vpp, bar test pattern :

Colour, contrast and brightness at mid-position, sound at minimum.
Programme selected : PR 01.

DC voltages measured between the point and earth using a digital voltmeter.

RECEPTEUR :
En UHF, niveau d'entrée 1 mV mire de barres
- SECAM, Norm L, Blanc 100%.

Par la prise Péritélévision, niveau d'entrée 1 Vcc, mire de barres .

Couleur, contraste, lumière à mi-course, son minimum.
Programme affecté PR 01.

Tensions continues relevées par rapport à la masse avec un voltmètre numérique.

EMPFÄNGER :
Bei UHF Eingangspegel 1 mV, Farbbalken :
- PAL, Norm G, Weiss 100%.

Über die Scartbuchse : Eingangspegel 1 Vss, Farbbalken :

Farbe, Kontrast, Helligkeit in der Mitte des Bereichs, Ton auf Minimum.
Zugeordnetes Programm PR 01.

Gleichspannungen mit einem digitalen Voltmeter zur Masse gemessen.

RICEVITORE :
In UHF, livello d'entrata 1 mV, monoscopio barre :
- PAL, norma G. bianco 100%.

Via SCART, livello d'entrata 1 Vpp, monoscopio barre :

Colore, Contrasto, Luminositá media, Suono minimo.
Programma selezionato PR 01.

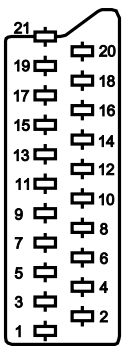
Tensioni continue rilevate rispetto alla massa con un voltmetro digitale.

RECEPTOR :
En UHF, nivel de entrada 1 mV, mira de barras :
- PAL, norma G, blanco 100%.

Por la toma Peritelevision, nivel de entrada 1 Vpp mira de barra.

Color, Contraste, luz a mitad de carrera, Sonido minimo.
Programa afectado PR 01.

Tensiones continuas marcadas en relacion a la masa con un voltimetro digital.



NOTE : (MAIN) *... etc. identifies each* **pcb module.**

NOTE : (MAIN) *... etc. repères des platines constituant l'appareil.*

HINWEIS : (MAIN) *... usw. Kennzeichnung der Platinen, aus denen das Gerät zusammengesetzt ist.*

NOTA : (MAIN) *... ecc. sigla delle piastre dell' apparecchio.*

NOTA : (MAIN) *... etc. marcas de las placas que constituyen el aparato.*

		ENGLISH	FRANÇAIS	DEUTSCH	ITALIANO	ESPAÑOL
1	⊖	AUDIO "R"	AUDIO "D"	AUDIO "R"	AUDIO "D"	AUDIO "D"
2	⊕	AUDIO "R"	AUDIO "D"	AUDIO "R"	AUDIO "D"	AUDIO "D"
3	⊖	AUDIO "L"	AUDIO "G"	AUDIO "L"	AUDIO "S"	AUDIO "I"
4	⊥	AUDIO	AUDIO	AUDIO	AUDIO	AUDIO
5	⊥	"BLUE"	"BLEU"	"BLAU"	"BLU"	"AZUL"
6	⊕	AUDIO "L" MONO	AUDIO "G" MONO	AUDIO "L" MONO	AUDIO "S" MONO	AUDIO "I" MONO
7	⊕	"BLUE"	"BLEU"	"BLAU"	BLU	AZUL
8	⊕	SLOW SWITCH	COMMUT. LENTE	AV UMSCHALTUNG	"COMMUTAZIONE LENTA"	"CONMUTACION LENTA"
9	⊥	"GREEN"	"VERT"	"GRÜN"	"VERDE"	"VERDE"
10	NC					
11	⊕	"GREEN"	"VERT"	"GRÜN"	"VERDE"	"VERDE"
12	NC					
13	⊥	"RED"	"ROUGE"	"ROT"	"ROSSO"	"ROJA"
14	NC					
15	⊕	"RED"	"ROUGE"	"ROT"	"ROSSO"	"ROJA"
16	⊕	FAST SWITCH	COMMUT. RAPIDE	AUSTASTUNG	"COMMUTAZIONE RAPIDA"	"CONMUTACION RAPIDA"
17	⊥	VIDEO	VIDEO	VIDEO	VIDEO	VIDEO
18	⊥	FAST SWITCH	COMMUT. RAPIDE	AUSTASTUNG	"COMMUTAZIONE RAPIDA"	"CONMUTACION RAPIDA"
19	⊖	VIDEO	VIDEO	VIDEO	VIDEO	VIDEO
20	⊕	VIDEO OR "SYNC"	VIDEO SYNCHRO	VIDEO ODER SYNCHRO	VIDEO O SINCRO	VIDEO O SINCRO
21	⊖	PLUG SCREEN BOX	BLINDAGE PRISE	ABSCHIRMUNG DES STECKERS	INVOLUCRO METAL-LICO DELLA PRESA	BLINDAJE DEL ENCHUFE

⊕ : INPUT - ENTRÉE - EINGANG - ENTRATA - ENTRADA • ⊖ : OUTPUT - SORTIE - AUSGANG - USCITA - SALIDA • ⊥ : EARTH - MASSE - MASSE - MASSA - MASA

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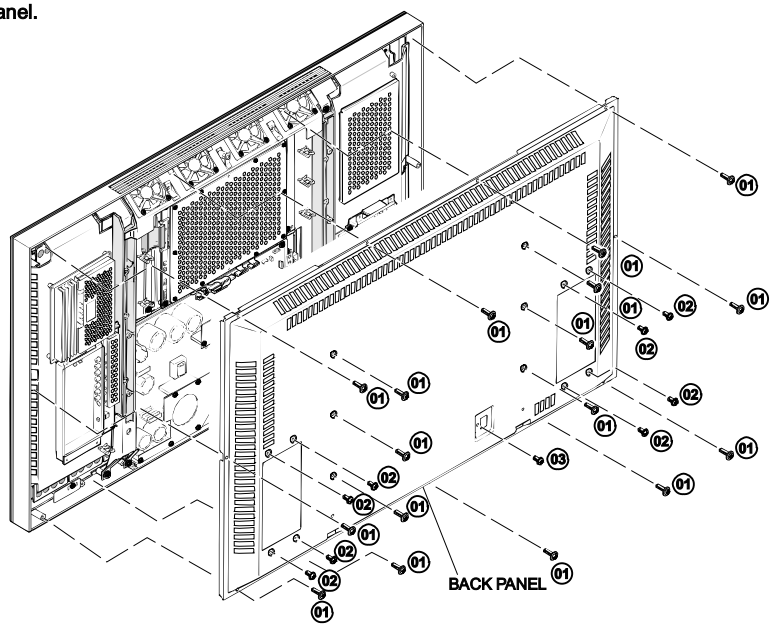
DISASSEMBLING THE MODULES

1. Removing the back panel

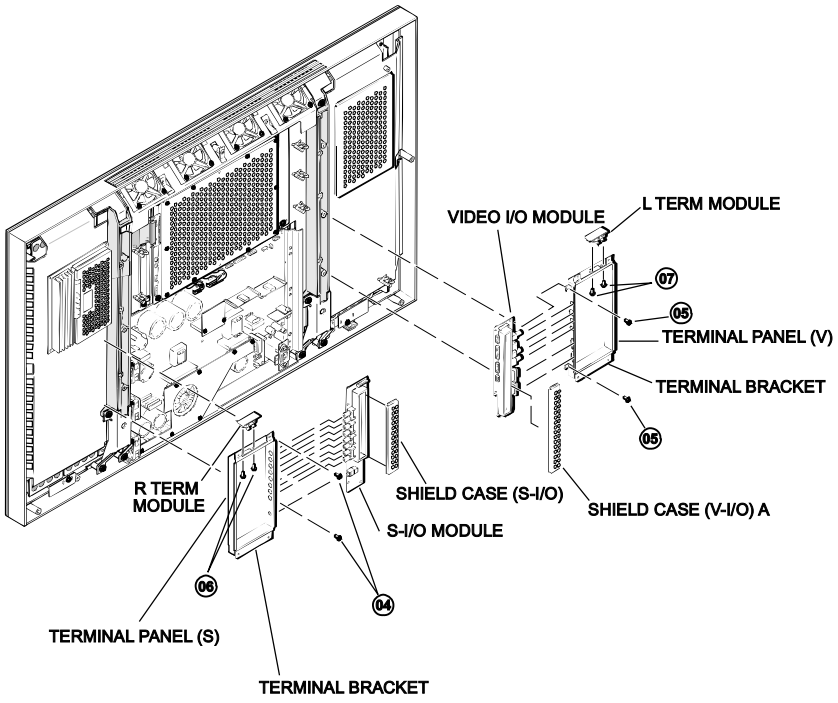
- Remove the 17 screws (01), the 8 screws (02) and the screw (03),
- Remove the back panel.



2. Removing the terminal panels (S), (V), R TERM, L TERM, S-I/O and VIDEO I/O modules

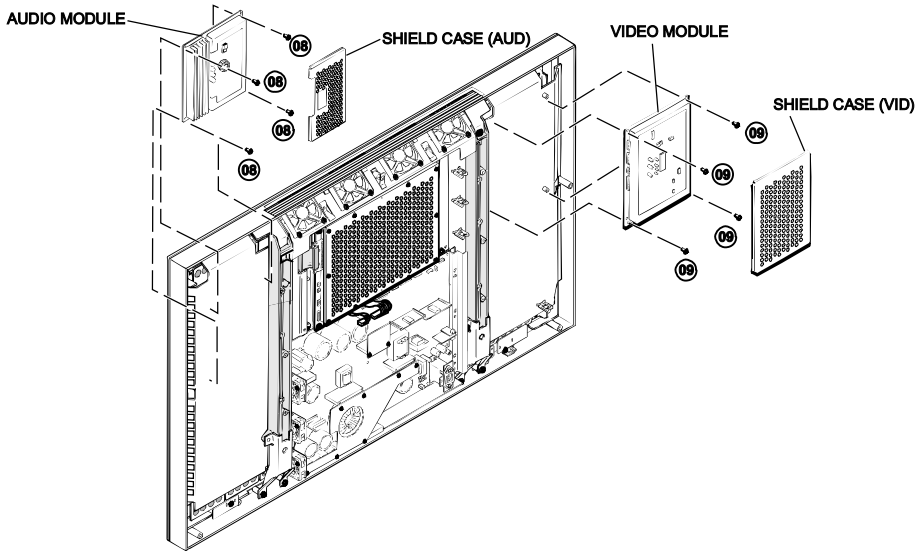
- Remove the 2 screws (04) of the terminal panel (S) on the left side of the set and remove the 2 screws (05) of the terminal panel (V) on the right side of the set,
- Remove the terminal panels (S) and (V),
- Pull out the S-I/O module and the VIDEO I/O module from the terminal panels,
- Remove the 2 screws (06) on the left side of the set and take out the R-TERM module,
- Remove the 2 screws (07) on the right side of the set and take out the L-TERM module.

.



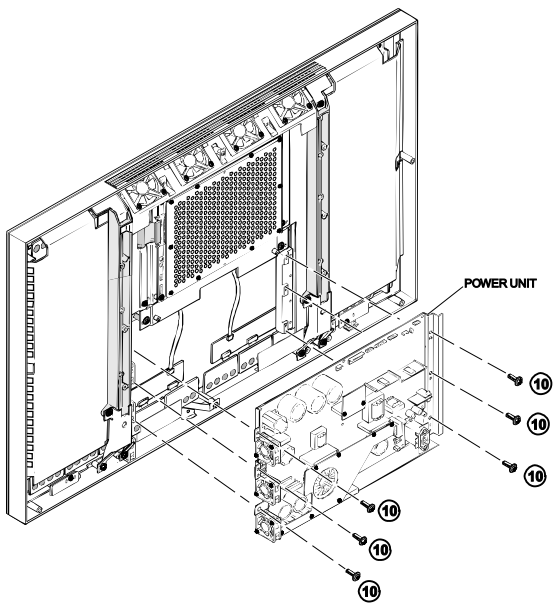
3. Removing the AUDIO and VIDEO modules

- Remove the 4 screws (08) and take out AUDIO module,
- Remove the 4 screws (09) and take out VIDEO module.



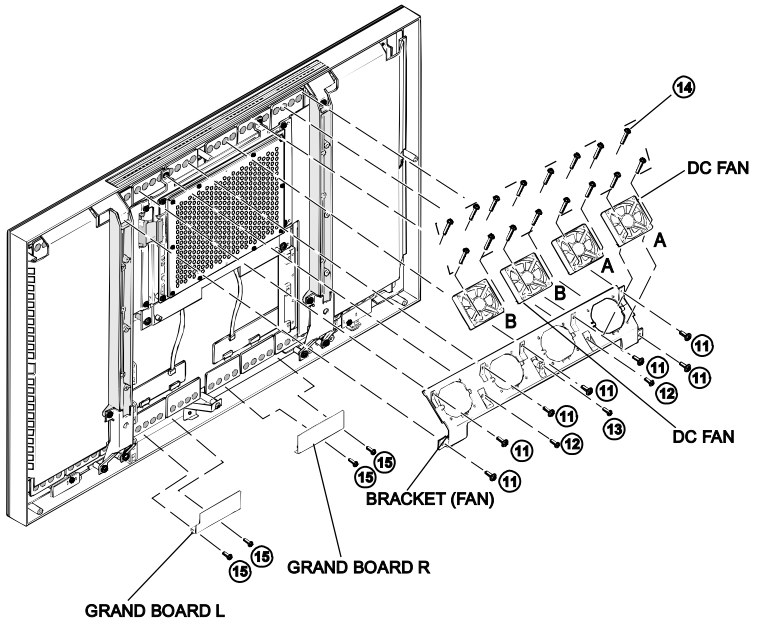
4. Removing the power module

- Remove the 6 screws (10) and take out the power unit.



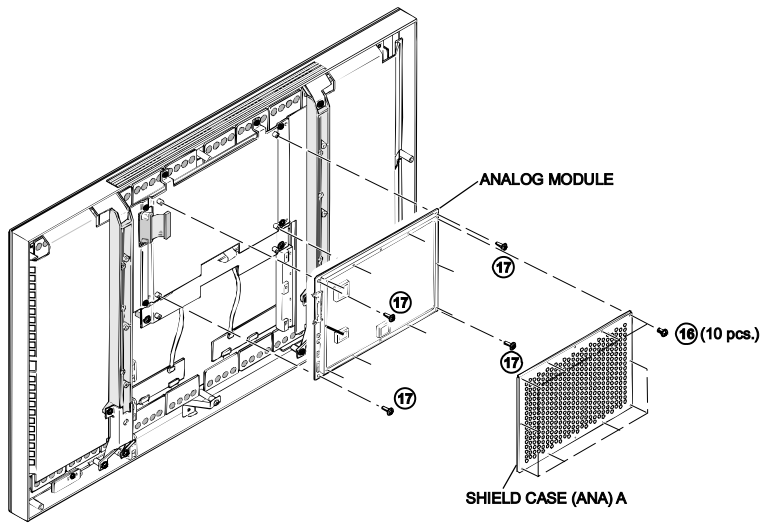
5. Removing the bracket (fan)/DC fan

- Remove the 7 screws ⑪, the 2 screws ⑫, and the screw ⑬, the bracket (fan),
- Take out the bracket (fan),
- Remove the 16 screws ⑭ and take out the DC fan from
- Remove the 4 screws ⑮ and take out the grand boards L and R



6. Removing the shield case (ANA)A/ANALOG module

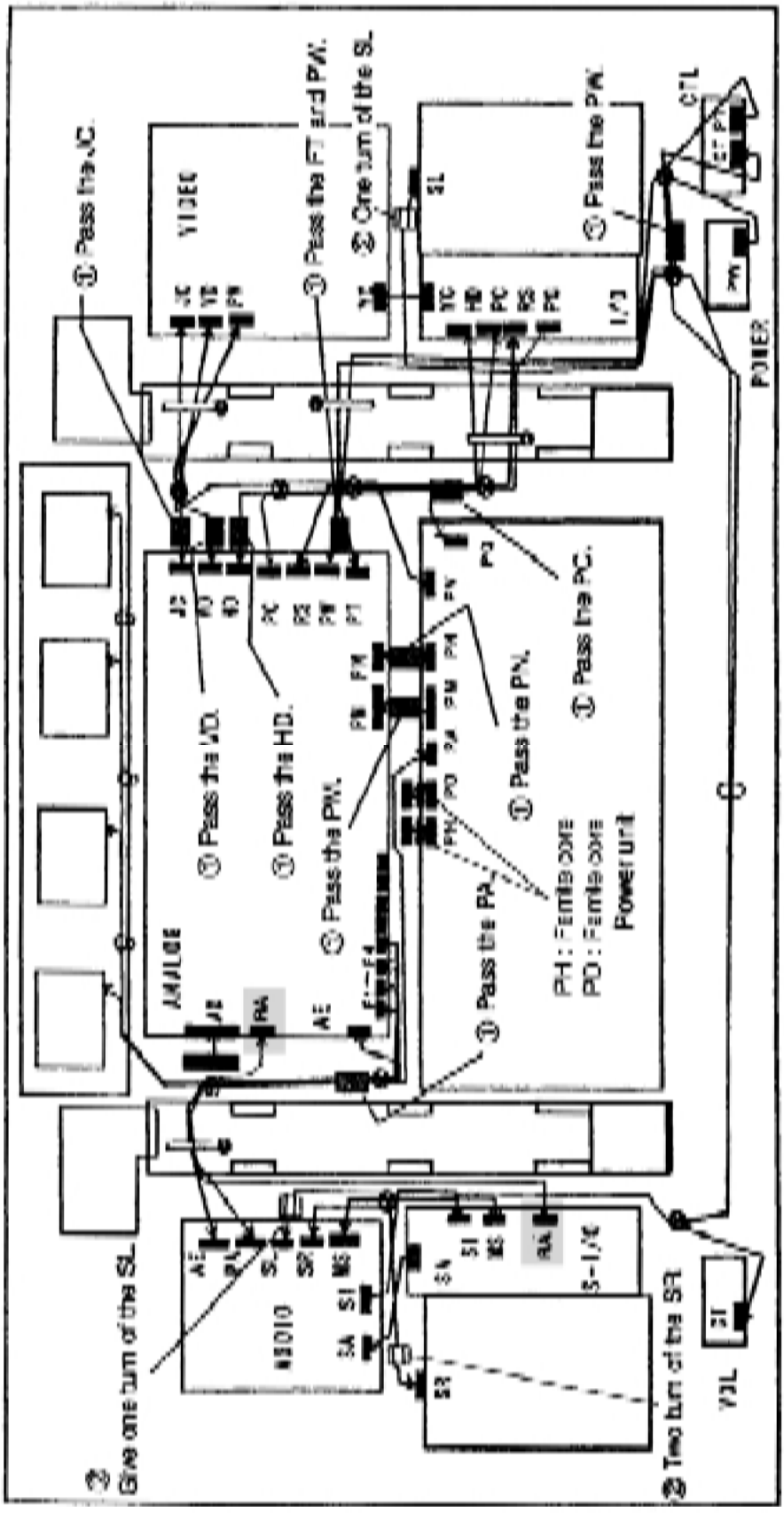
- Remove the 10 screws ⑯ and take out the shield case (ANA) A,
- Remove the 4 screws ⑰ and take out the ANALOG module.



WIRE LOCATION

After replacement of the modules refer to the below diagram to mount ferrites and connect the modules again.

Note: "RA" connectors are only fitted in 42WS90E2.

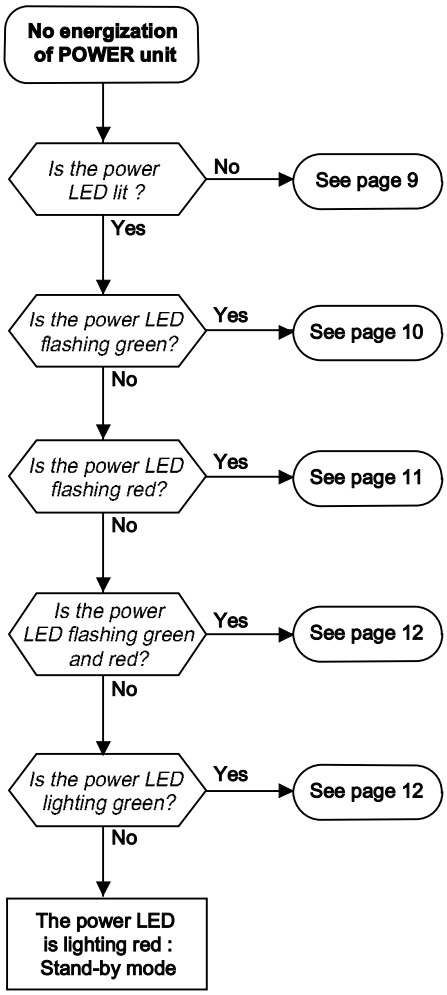


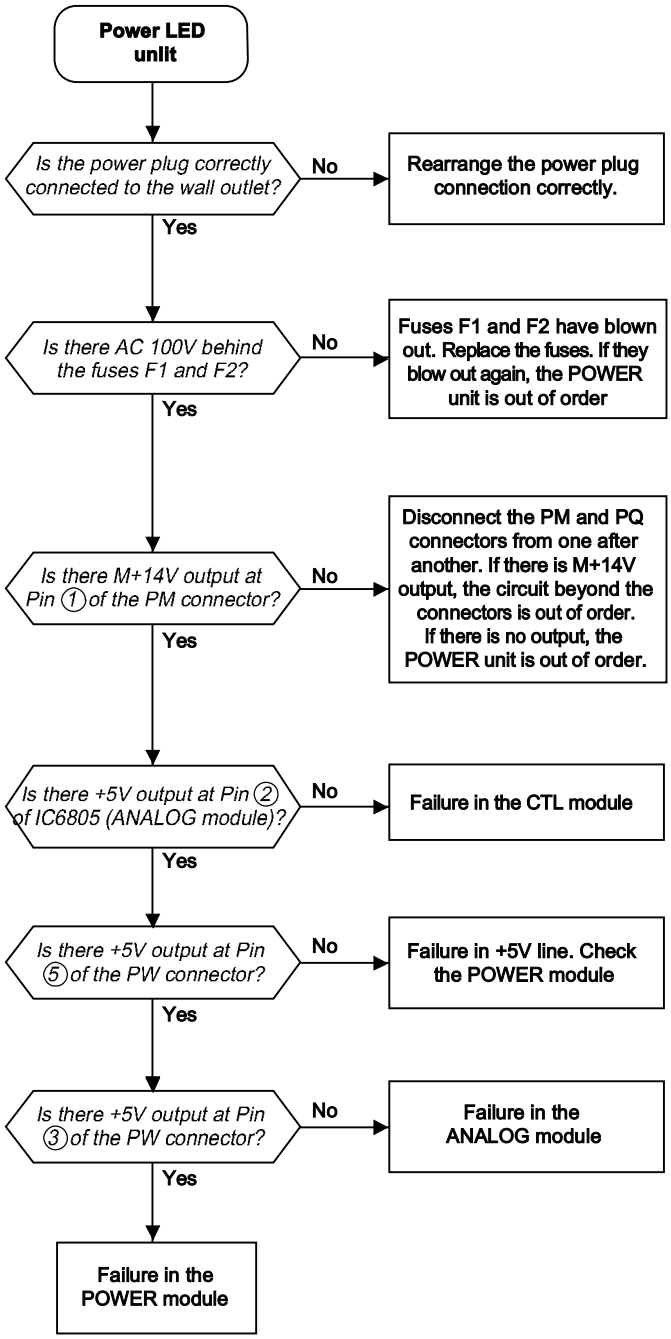
ferrite core : ① ZCAT2032 930 (code 351 571 10)
② ESD-R-19 (code 351 571 20)

DIAGNOSTIC

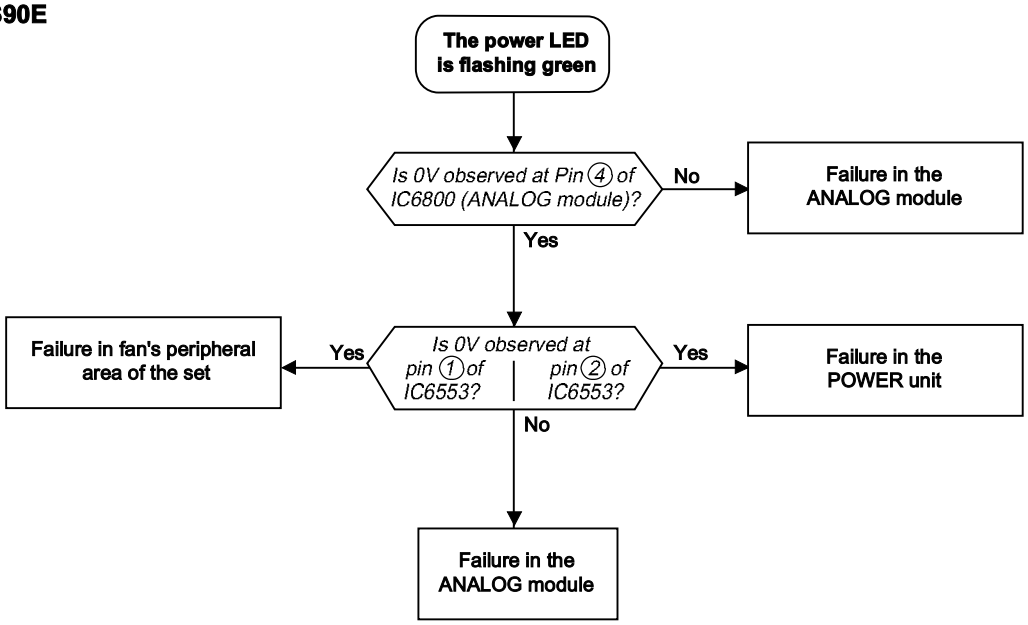
The power LED located on the front of the display is a bicolour LED wich indicates the operating status including the normal, standby and three error detections

42WS90E-42WS90E2

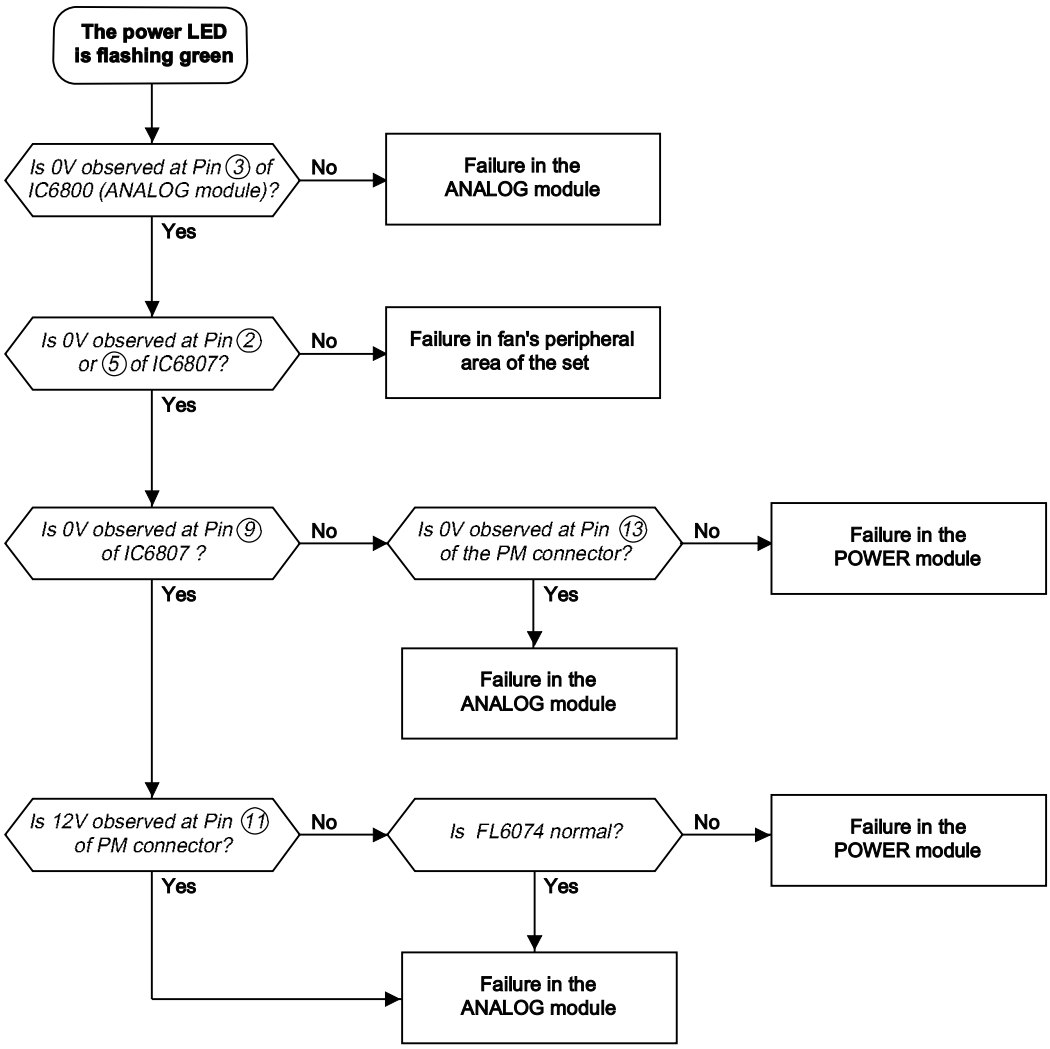



Power LED unlit
Is the power plug correctly connected to the wall outlet?
No
Rearrange the power plug connection correctly.
Yes
Is there AC 100V behind the fuses F1 and F2?
No
Fuses F1 and F2 have blown out. Replace the fuses. If they blow out again, the POWER unit is out of order
Yes
Is there M+14V output at Pin ① of the PM connector?
No
Disconnect the PM and PQ connectors from one after another. If there is M+14V output, the circuit beyond the connectors is out of order. If there is no output, the POWER unit is out of order.
Yes
Is there +5V output at Pin ② of IC6805 (ANALOG module)?
No
Failure in the CTL module
Yes
Is there +5V output at Pin ⑤ of the PW connector?
No
Failure in +5V line. Check the POWER module
Yes
Is there +5V output at Pin ③ of the PW connector?
No
Failure in the ANALOG module
Yes
Failure in the POWER module

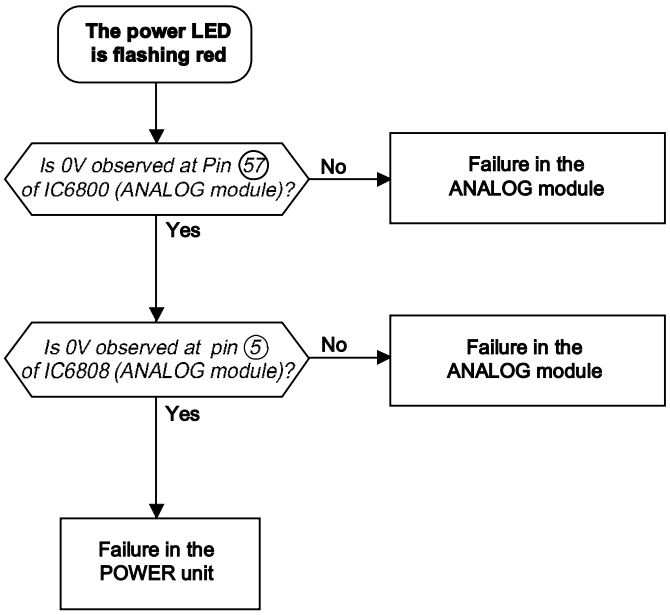
42WS90E


The power LED is flashing green
Is 0V observed at Pin ④ of IC6800 (ANALOG module)?
No
Failure in the ANALOG module
Yes
Failure in fan's peripheral area of the set
Yes
Is 0V observed at pin ① of IC6553? | pin ② of IC6553?
Yes
Failure in the POWER unit
No
Failure in the ANALOG module

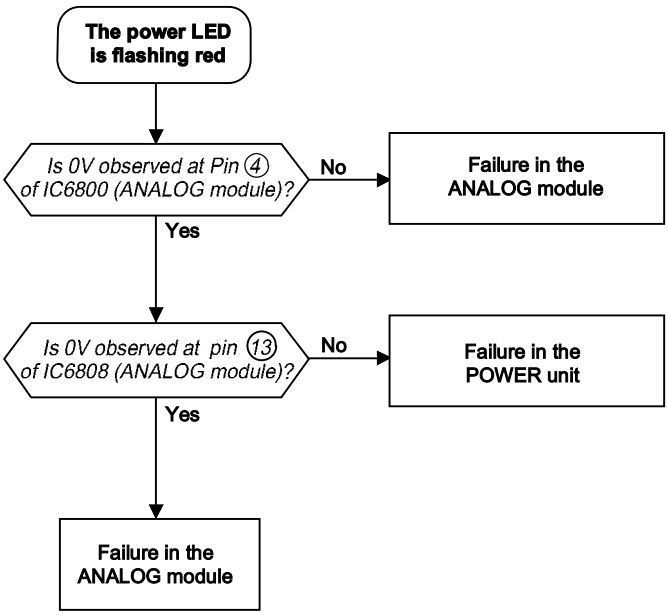
42WS90E2


The power LED is flashing green
Is 0V observed at Pin ③ of IC6800 (ANALOG module)?
No
Failure in the ANALOG module
Yes
Is 0V observed at Pin ② or ⑤ of IC6807?
No
Failure in fan's peripheral area of the set
Yes
Is 0V observed at Pin ⑨ of IC6807 ?
No
Is 0V observed at Pin ⑬ of the PM connector?
No
Failure in the POWER module
Yes
Yes
Failure in the ANALOG module
Is 12V observed at Pin ⑪ of PM connector?
No
Is FL6074 normal?
No
Failure in the POWER module
Yes
Yes
Failure in the ANALOG module

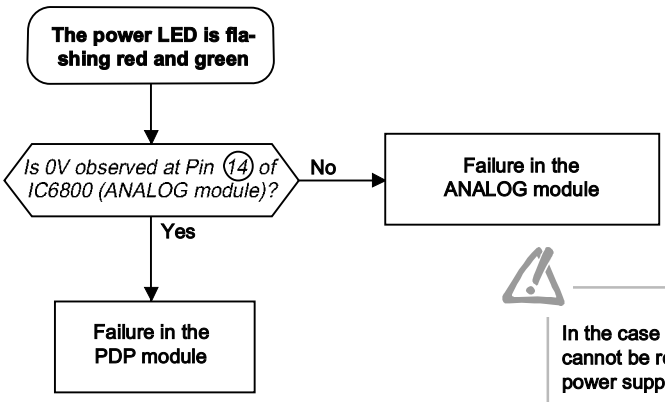
42WS90E


The power LED is flashing red
Is 0V observed at Pin 57 of IC6800 (ANALOG module)?
No
Failure in the ANALOG module
Yes
Is 0V observed at pin 5 of IC6808 (ANALOG module)?
No
Failure in the ANALOG module
Yes
Failure in the POWER unit

42WS90E2


The power LED is flashing red
Is 0V observed at Pin 4 of IC6800 (ANALOG module)?
No
Failure in the ANALOG module
Yes
Is 0V observed at pin 13 of IC6808 (ANALOG module)?
No
Failure in the POWER unit
Yes
Failure in the ANALOG module

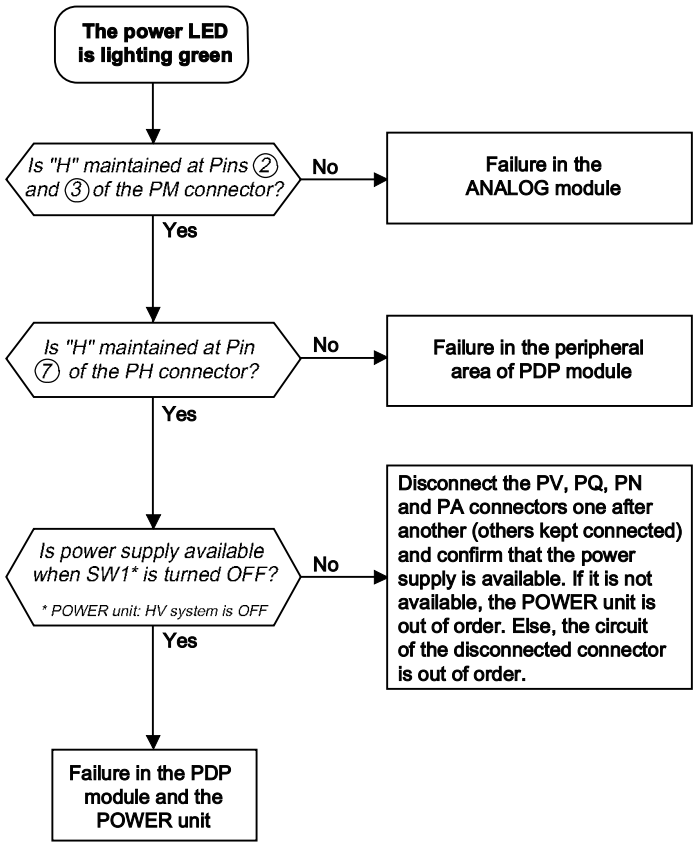
42WS90E-42WS90E2


The power LED is flashing red and green
Is 0V observed at Pin (14) of IC6800 (ANALOG module)?
No
Failure in the ANALOG module
Yes
Failure in the PDP module

In the case of green and red flashing, the power supply cannot be reset with the OFF/ON operation at the mains power supply, remote control, and wall outlet.

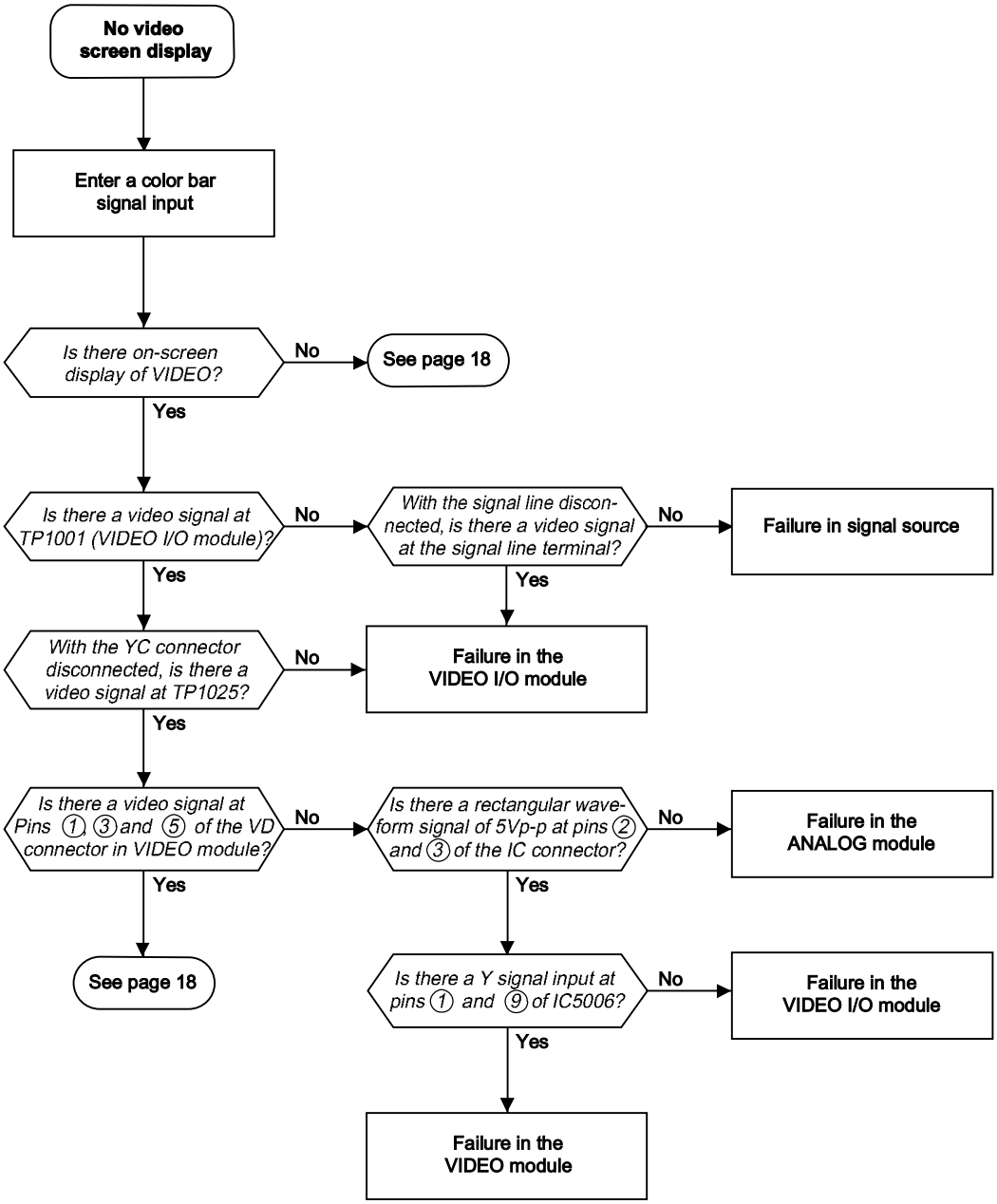
For the alarm reset, keep pressing the input changeover key of the main unit and move the mains power supply to the "ON" position at the main unit. While doing so, it is necessary to keep pressing the input changeover key of the main unit for more than two seconds.In the case of green and red flashing, the power supply cannot be reset with the OFF/ON operation at the mains power supply, remote control, and wall outlet.

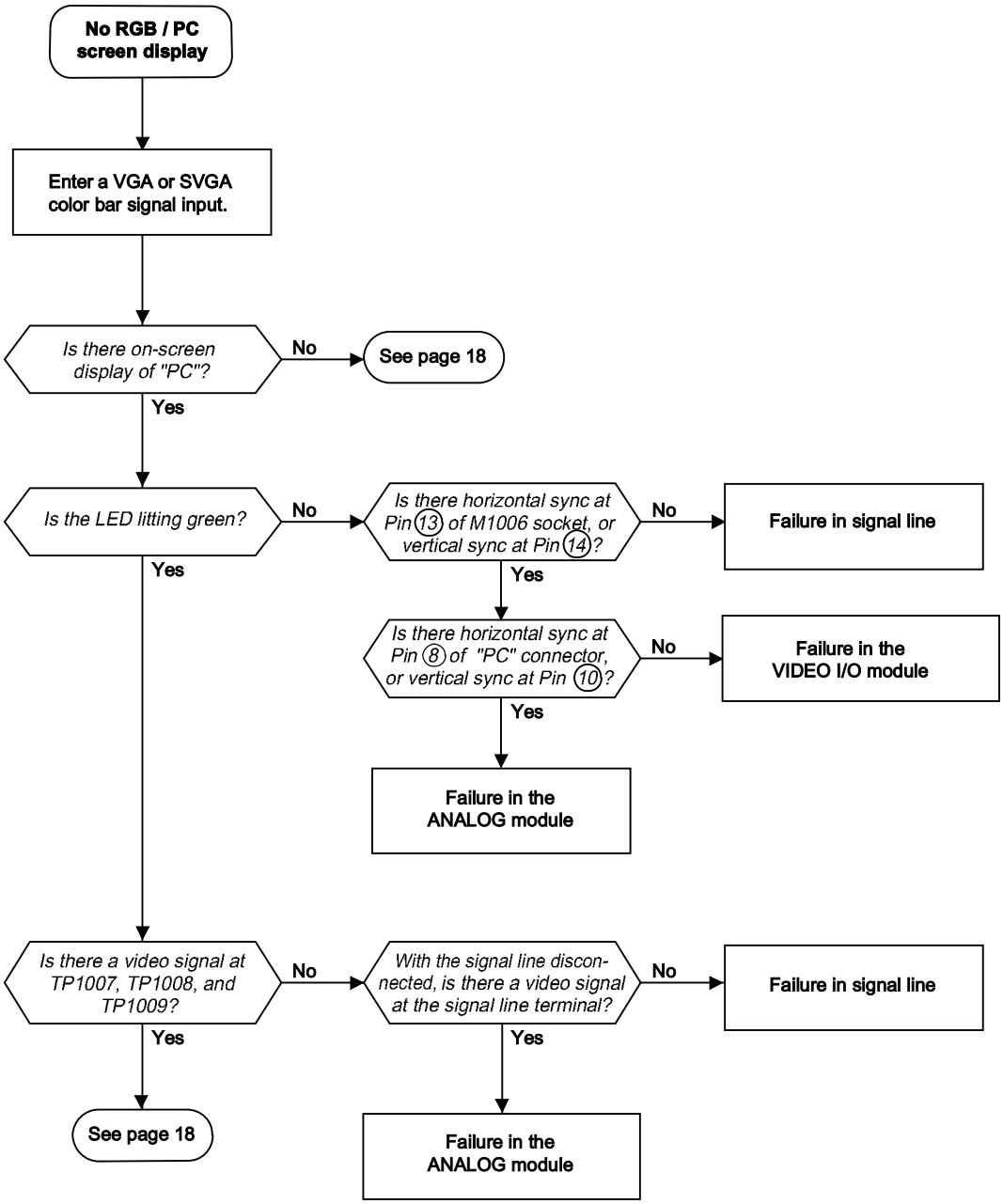
42WS90E-42WS90E2


The power LED is lighting green
Is "H" maintained at Pins (2) and (3) of the PM connector?
No
Failure in the ANALOG module
Yes
Is "H" maintained at Pin (7) of the PH connector?
No
Failure in the peripheral area of PDP module
Yes
Is power supply available when SW1* is turned OFF?
* POWER unit: HV system is OFF
No
Disconnect the PV, PQ, PN and PA connectors one after another (others kept connected) and confirm that the power supply is available. If it is not available, the POWER unit is out of order. Else, the circuit of the disconnected connector is out of order.
Yes
Failure in the PDP module and the POWER unit

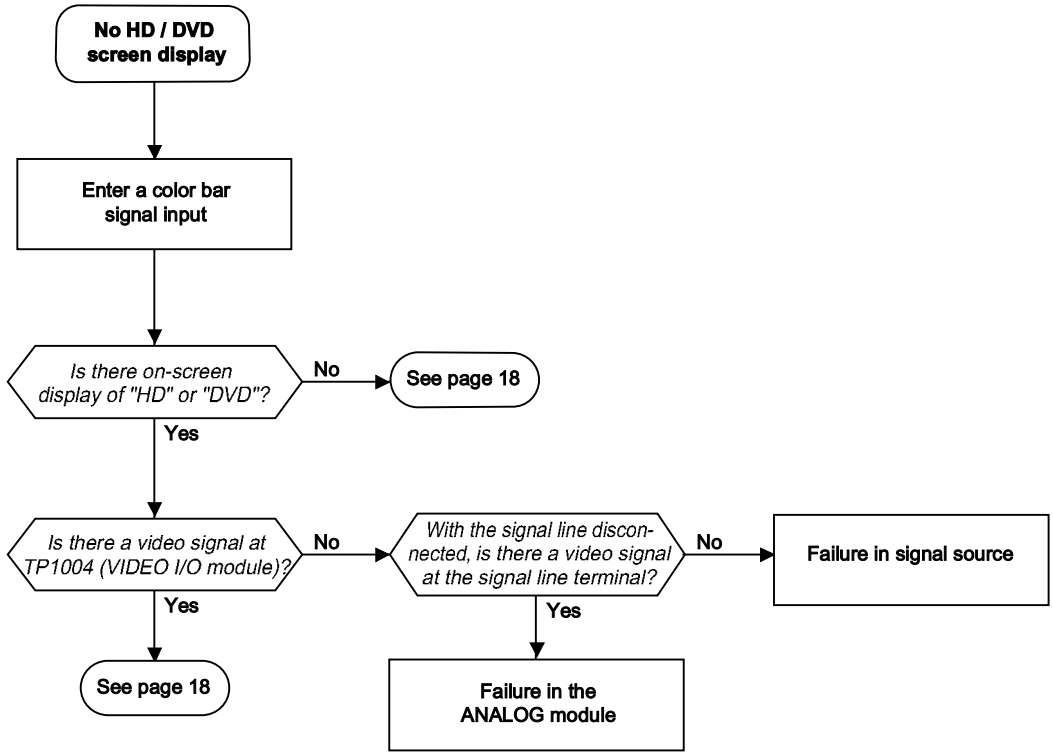
VIDEO TROUBLESHOOTING

42WS90E-42WS90E2

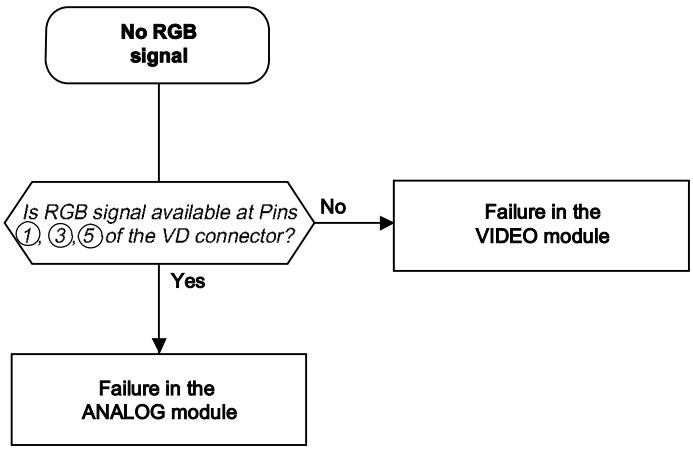

No video screen display
Enter a color bar signal input
Is there on-screen display of VIDEO?
No
See page 18
Yes
Is there a video signal at TP1001 (VIDEO I/O module)?
No
With the signal line disconnected, is there a video signal at the signal line terminal?
No
Failure in signal source
Yes
Yes
With the YC connector disconnected, is there a video signal at TP1025?
No
Failure in the VIDEO I/O module
Yes
Is there a video signal at Pins ①, ③ and ⑤ of the VD connector in VIDEO module?
No
Is there a rectangular waveform signal of 5Vp-p at pins ② and ③ of the IC connector?
No
Failure in the ANALOG module
Yes
Yes
See page 18
Is there a Y signal input at pins ① and ⑨ of IC5006?
No
Failure in the VIDEO I/O module
Yes
Failure in the VIDEO module

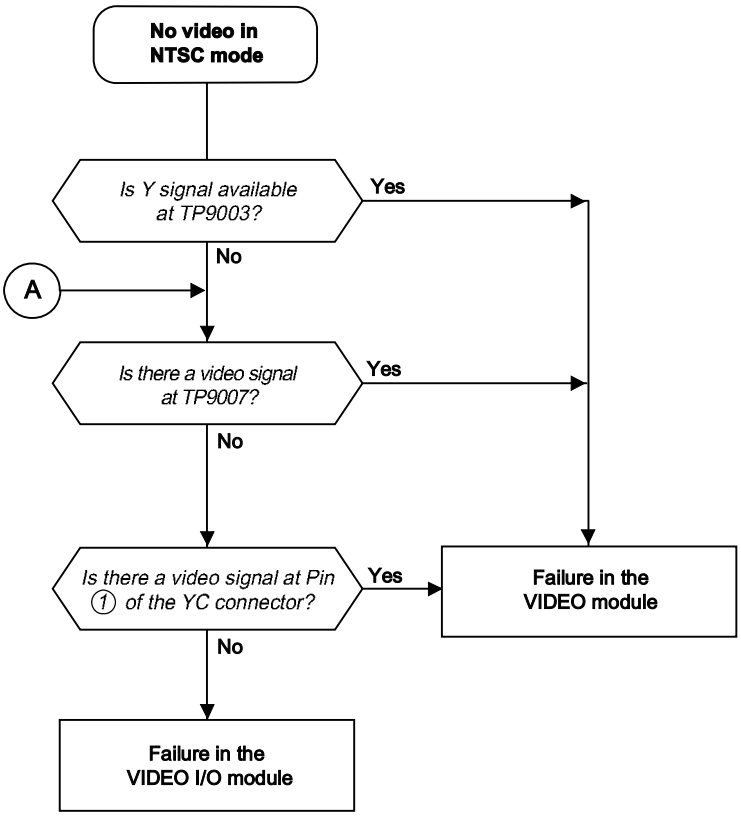

No RGB / PC screen display
Enter a VGA or SVGA color bar signal input.
Is there on-screen display of "PC"?
No
See page 18
Yes
Is the LED litting green?
No
Is there horizontal sync at Pin (13) of M1006 socket, or vertical sync at Pin (14)?
No
Failure in signal line
Yes
Is there horizontal sync at Pin (8) of "PC" connector, or vertical sync at Pin (10)?
No
Failure in the VIDEO I/O module
Yes
Failure in the ANALOG module
Yes
Is there a video signal at TP1007, TP1008, and TP1009?
No
With the signal line disconnected, is there a video signal at the signal line terminal?
No
Failure in signal line
Yes
See page 18
Yes
Failure in the ANALOG module

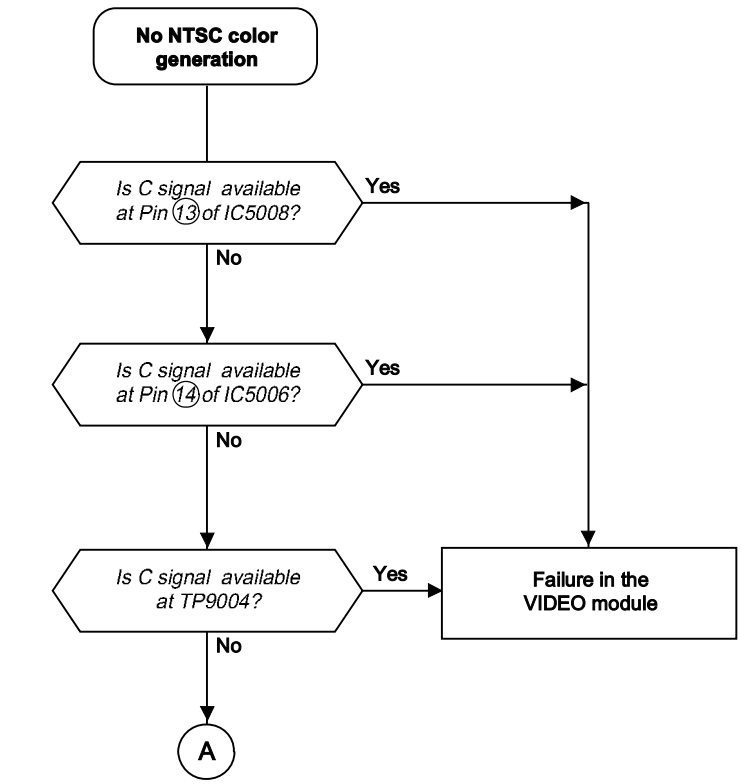
42WS90E-42WS90E2

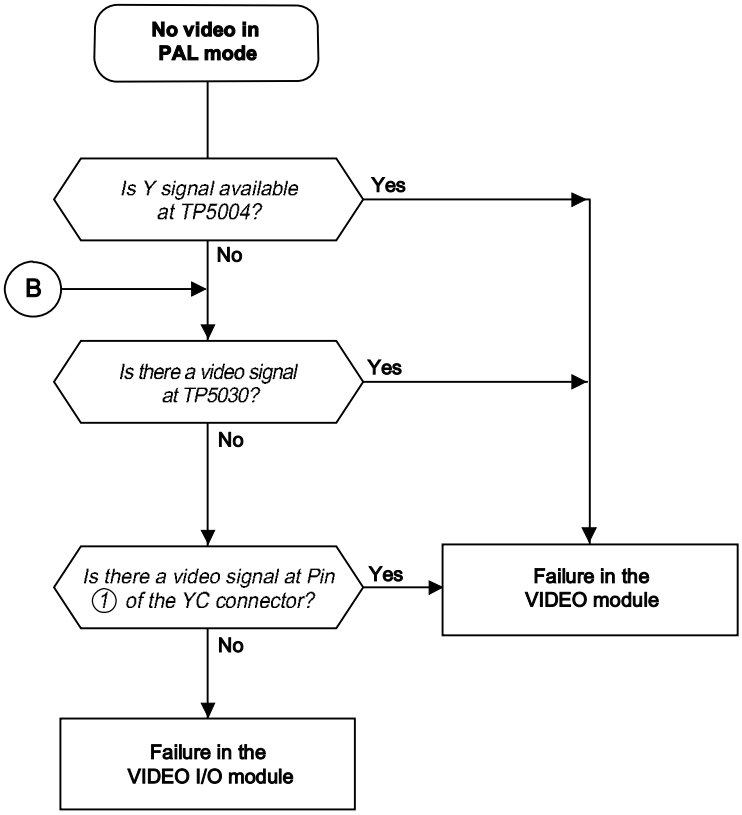

No HD / DVD screen display
Enter a color bar signal input
Is there on-screen display of "HD" or "DVD"?
No
See page 18
Yes
Is there a video signal at TP1004 (VIDEO I/O module)?
No
With the signal line disconnected, is there a video signal at the signal line terminal?
No
Failure in signal source
Yes
Yes
See page 18
Failure in the ANALOG module

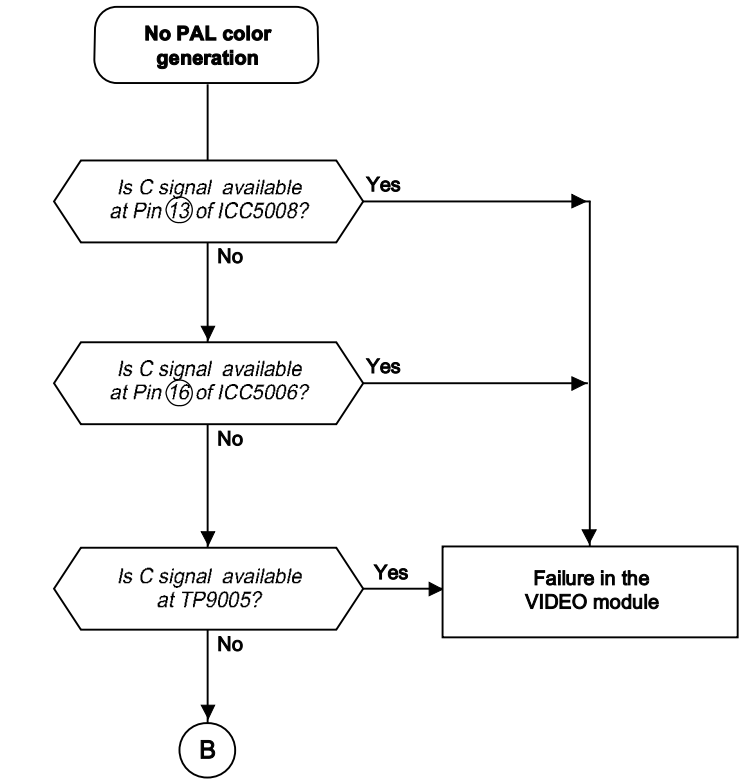
42WS90E-42WS90E2

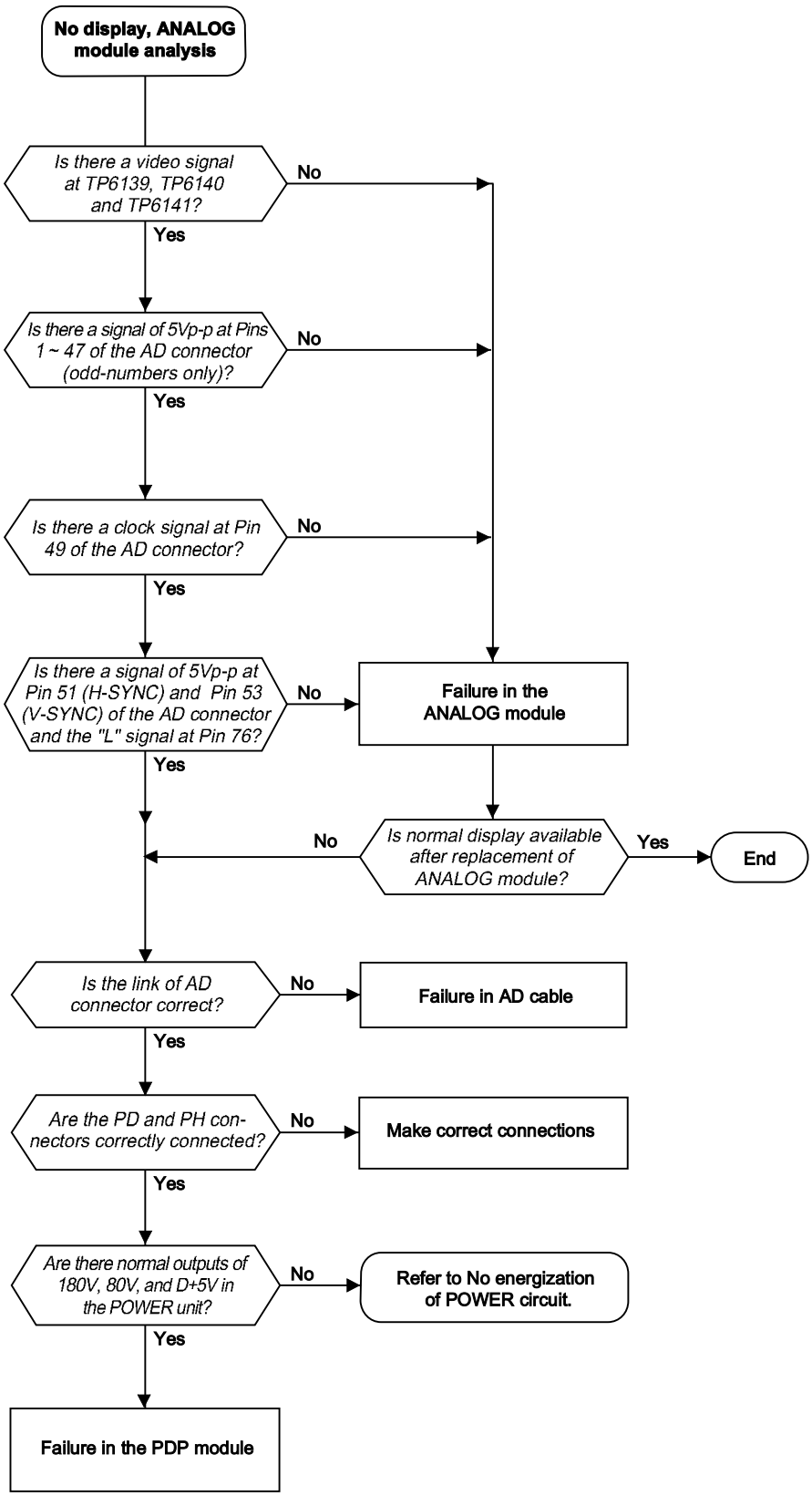

No RGB signal
Is RGB signal available at Pins ①, ③, ⑤ of the VD connector?
No
Failure in the VIDEO module
Yes
Failure in the ANALOG module


No video in NTSC mode
Is Y signal available at TP9003?
Yes
No
A
Is there a video signal at TP9007?
Yes
No
Is there a video signal at Pin ① of the YC connector?
Yes
Failure in the VIDEO module
No
Failure in the VIDEO I/O module

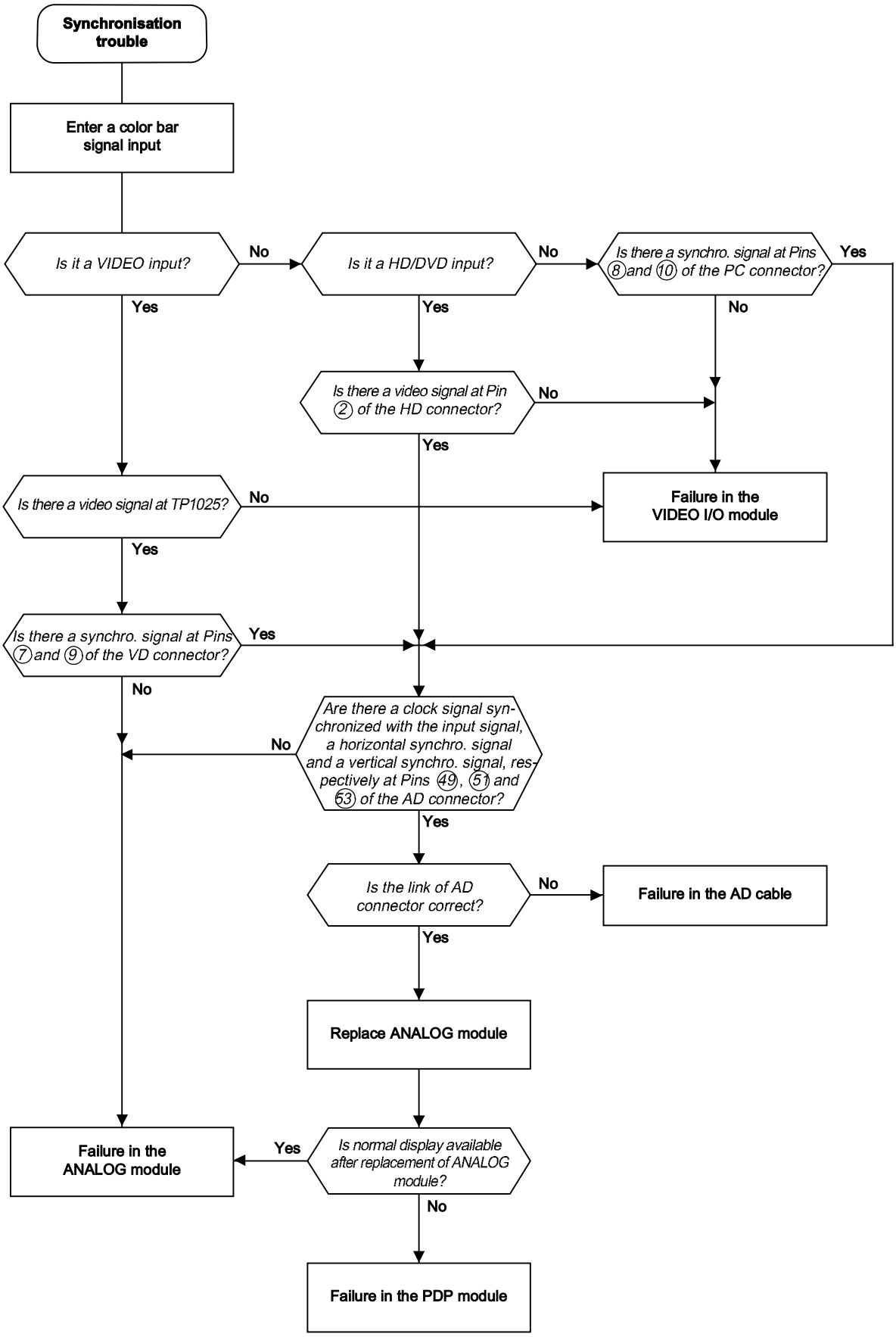

No NTSC color generation
Is C signal available at Pin ⑬ of IC5008?
Yes
No
Is C signal available at Pin ⑭ of IC5006?
Yes
No
Is C signal available at TP9004?
Yes
Failure in the VIDEO module
No
A


No video in PAL mode
Is Y signal available at TP5004?
Yes
No
B
Is there a video signal at TP5030?
Yes
No
Is there a video signal at Pin (1) of the YC connector?
Yes
Failure in the VIDEO module
No
Failure in the VIDEO I/O module


No PAL color generation
Is C signal available at Pin (13) of ICC5008?
Yes
No
Is C signal available at Pin (16) of ICC5006?
Yes
No
Is C signal available at TP9005?
Yes
Failure in the VIDEO module
No
B

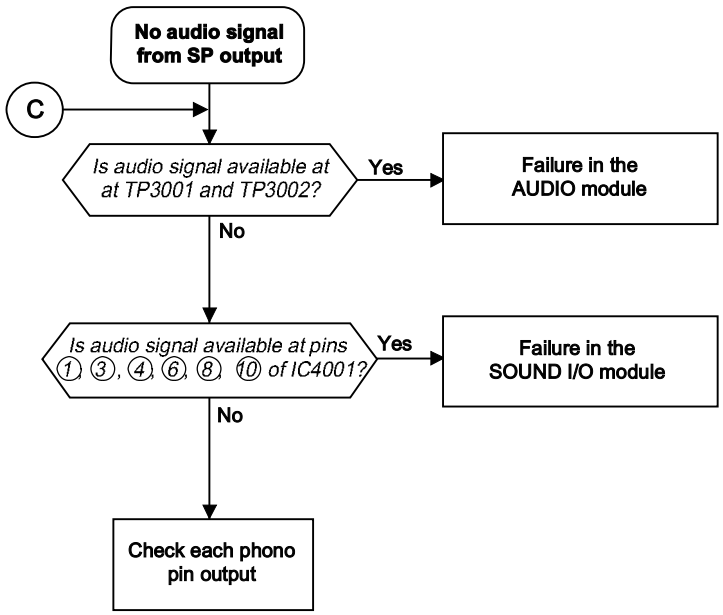

No display, ANALOG module analysis
Is there a video signal at TP6139, TP6140 and TP6141?
No
Yes
Is there a signal of 5Vp-p at Pins 1 ~ 47 of the AD connector (odd-numbers only)?
No
Yes
Is there a clock signal at Pin 49 of the AD connector?
No
Yes
Is there a signal of 5Vp-p at Pin 51 (H-SYNC) and Pin 53 (V-SYNC) of the AD connector and the "L" signal at Pin 76?
No
Failure in the ANALOG module
Yes
Is normal display available after replacement of ANALOG module?
No
Yes
End
Is the link of AD connector correct?
No
Failure in AD cable
Yes
Are the PD and PH connectors correctly connected?
No
Make correct connections
Yes
Are there normal outputs of 180V, 80V, and D+5V in the POWER unit?
No
Refer to No energization of POWER circuit.
Yes
Failure in the PDP module

42WS90E-42WS90E2

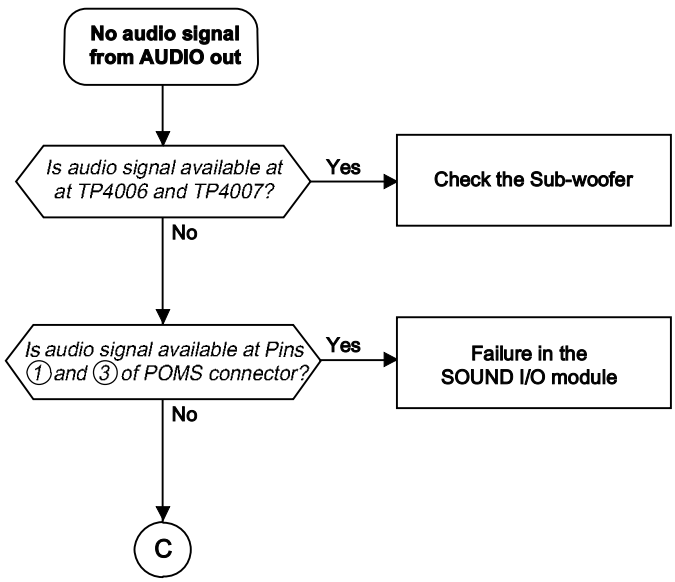

Synchronisation trouble
Enter a color bar signal input
Is it a VIDEO input?
No
Is it a HD/DVD input?
No
Is there a synchro. signal at Pins ⑧ and ⑩ of the PC connector?
Yes
Yes
Yes
No
Is there a video signal at Pin ② of the HD connector?
No
Yes
Is there a video signal at TP1025?
No
Failure in the VIDEO I/O module
Yes
Is there a synchro. signal at Pins ⑦ and ⑨ of the VD connector?
Yes
No
Are there a clock signal synchronized with the input signal, a horizontal synchro. signal and a vertical synchro. signal, respectively at Pins ㊾, ㊿ and ㊸ of the AD connector?
No
Yes
Is the link of AD connector correct?
No
Failure in the AD cable
Yes
Replace ANALOG module
Failure in the ANALOG module
Yes
Is normal display available after replacement of ANALOG module?
No
Failure in the PDP module

AUDIO TROUBLESHOOTING

42WS90E-42WS90E2


No audio signal from SP output
C
Is audio signal available at at TP3001 and TP3002?
Yes
Failure in the AUDIO module
No
Is audio signal available at pins ①, ③, ④, ⑥, ⑧, ⑩ of IC4001?
Yes
Failure in the SOUND I/O module
No
Check each phono pin output

42WS90E-42WS90E2


No audio signal from AUDIO out
Is audio signal available at at TP4006 and TP4007?
Yes
Check the Sub-woofer
No
Is audio signal available at Pins ① and ③ of POMS connector?
Yes
Failure in the SOUND I/O module
No
C

ADJUSTMENTS

ADJUSTMENTS NECESSARY AFTER REPLACEMENT OF MODULES:
- After replacement of ANALOG module, perform the adjusments of "Video level" and "Video screen position".
- After replacement of VIDEO module, perform the adjusments of "video level" and "video screen position".
- After replacement of POWER or PDP module, perform the adjusment of "-180V and +180V" and "+5V".

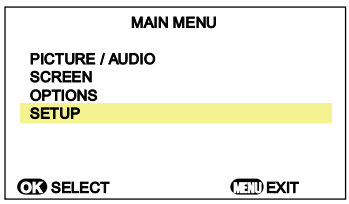
Replacing another module does not require further adjustment unless abnormal conditions are encountered.

OSD CONTROLS

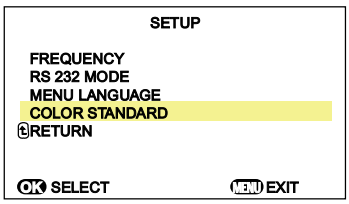
Before entering the service mode, it could be necessary to configure the plasma monitor in the On Screen menu.

ACCESSING COLOR STANDARD

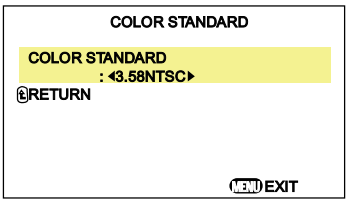
- Using the remote control, press "menu" button.
- The "main" menu appears on the screen.



- Press the ⌃ / ⌄ buttons to select the "setup" line.
- The "setup" menu appears on the screen.



- Select the "color standard" line.
- The "color standard" menu appears on the screen.



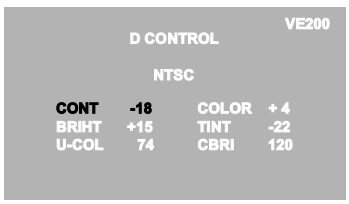
- Press the ⟨ / ⟩ buttons to select the color standard.

SERVICE MODE

It is necessary to enter the Service Mode in order to carry out alignment of the set. Most adjustments must be made with the RCU.

1 ACCESSING SERVICE MODE

- Using the remote control, press successively the timer (🕘), OK, mute (🔇) and timer (🕘) buttons.
- The main service menu appears on the screen.



The Service Mode can also be accessed as follow:
- Press the stand-by button of the remote control,
- Switch the power OFF using the button of the keyboard
- While pressing the volume - button, switch the power ON.

2 NAVIGATION INSIDE THE SERVICE MODE

- Press the "menu" button to select the menu.
- Press the ⌃ / ⌄ buttons to select the menu line.
- Press the ⟨ / ⟩ buttons to make adjustments.

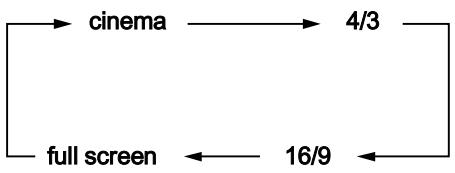
NB : the value of the adjustment is memorized automatically.

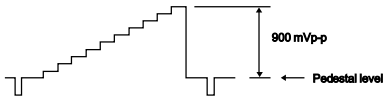
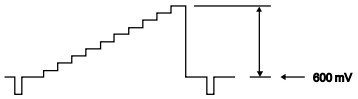
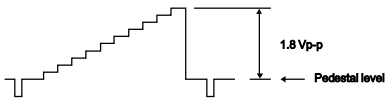
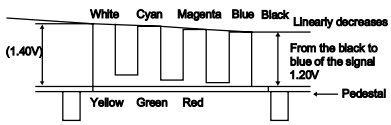
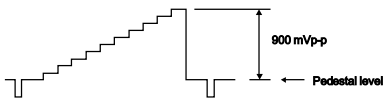
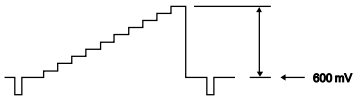
3 EXITING FROM SERVICE MODE

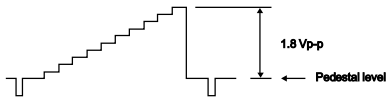
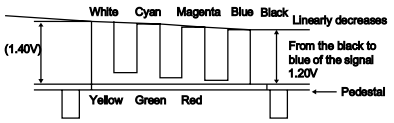
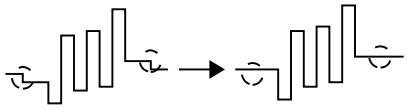
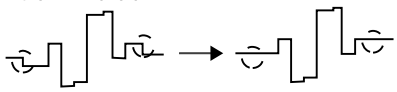
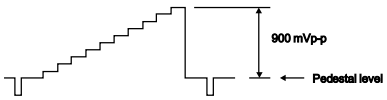
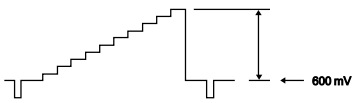
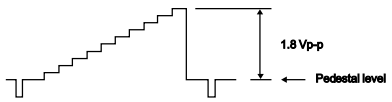
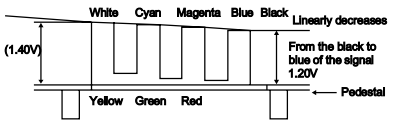
- To exit the service mode menu press successively, the timer (🕘), OK, mute (🔇) and timer (🕘) buttons on the remote control.

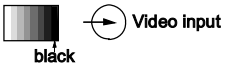
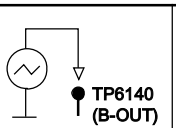
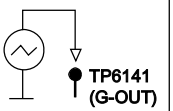
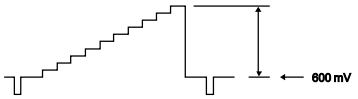
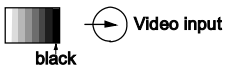
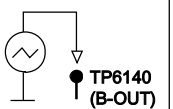
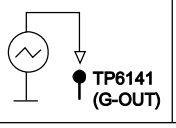
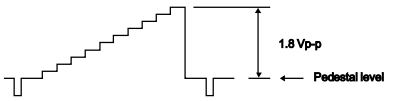
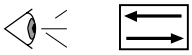
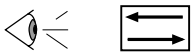
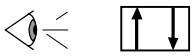
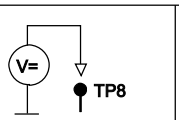
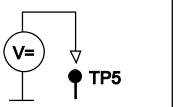
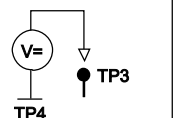
ZOOM SEQUENCE

It could be necessary to change the zoom mode in order to carry out some alignments of the set. Press the "zoom" button of the remote control. The mode switches as shown below.



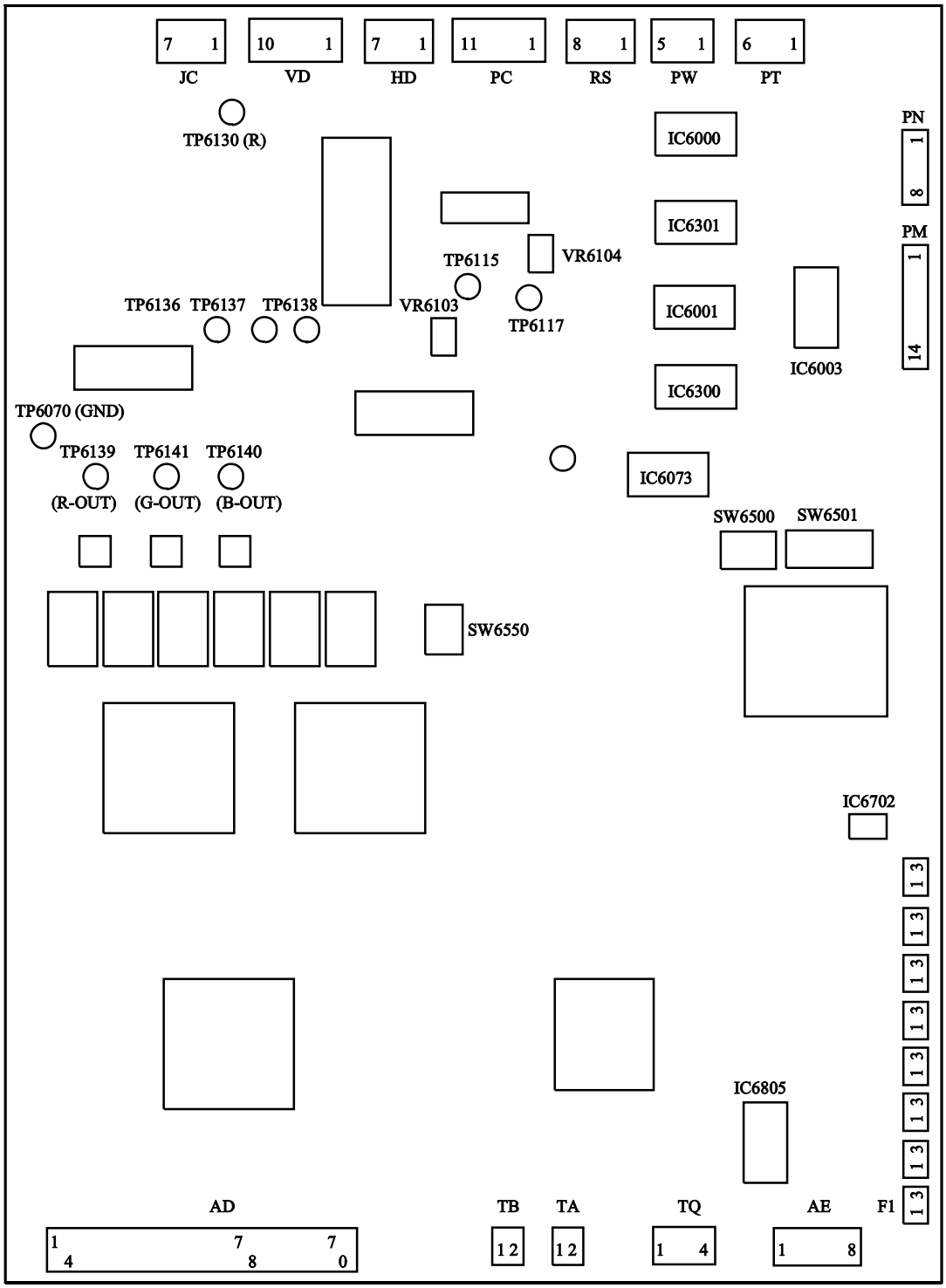
VIDEO Video level	L9009	Select standard "3.58NTSC" No signal at Video input	Hz TP9013	Adjust L9009 : f = 28,6363 MHz
		Select standard "AUTO" No signal at Video input		
ANALOG Video level	SERVICE MODE "D-CONTROL NTSC" menu	NTSC grey scale test pattern white =100% Video input black	Line "C-BRI"	Adjust "C-BRI" line to +120
			TP6130 (42WS90E) TP6138 (42WS90E2)	Adjust "U-COL" line to obtain 900 mVp-p 
			TP6139 (R-OUT)	Adjust "BRIHT" line to obtain 600mV DC 
			TP6140 (B-OUT) TP6141 (G-OUT)	Check that Pedestal level is 600 mV, if not perform adjustment of sub-brightness
	SERVICE MODE "D-CONTROL NTSC" menu		TP6139 (R-OUT)	Adjust "CONT" line to obtain 1.8Vp-p 
			TP6140 (B-OUT) TP6141 (G-OUT)	Check that Pedestal level is 1.8Vp-p, if not perform adjustment of sub-contrast
	SERVICE MODE "D-CONTROL NTSC" menu	NTSC colour bar test pattern Video input	TP6140 (B-OUT)	Adjust "COLOR" line to obtain a blue level : 1.2Vp-p (42WS90E) or 1.4 Vp-p (42WS90E2) Adjust "TINT" line to obtain a blue level : 1.2Vp-p (42WS90E) or 1.4 Vp-p (42WS90E2)  Repeat alternatively the "COLOR" and TINT" adjustments
	SERVICE MODE "D-CONTROL PAL" menu	PAL grey scale test pattern white =100% Video input black	Line "C-BRI"	Adjust "C-BRI" line to +120
			TP6130 (42WS90E) TP6138 (42WS90E2)	Adjust "U-COL" line to obtain 900 mVp-p 
			TP6139 (R-OUT)	Adjust "BRIHT" line to obtain 600mV DC 
			TP6140 (B-OUT) TP6141 (G-OUT)	Check that Pedestal level is 600 mV, if not perform adjustment of sub-brightness

ANALOG Video level	SERVICE MODE "D-CONTROL PAL" menu	PAL grey scale test pattern white =100% black Video input	TP6139 (R-OUT)	Adjust "CONT" line to obtain 1.8Vp-p 
			TP6140 (B-OUT) TP6141 (G-OUT)	Check that Pedestal level is 1.8Vp-p, if not perform adjustment of sub-contrast
	SERVICE MODE "D-CONTROL PAL" menu	PAL colour bar test pattern Video input	TP6140 (B-OUT)	Adjust "COLOR" line to obtain a blue level : 1.2Vp-p (42WS90E) or 1.4 Vp-p (42WS90E2) 
	SERVICE MODE "D-CONTROL SECAM" menu	SECAM colour bar test pattern Video input	TP5016	Adjust "BELL" line to obtain a uniform waweform of chroma level
			TP5014	Adjust "B-Y" line to obtain a linear black level in the B-Y waveform 
			TP5009	Adjust "R-Y" line to obtain a linear black level in the R-Y waveform 
	SERVICE MODE "D-CONTROL SECAM" menu	SECAM grey scale test pattern white =100% black Video input	Line "C-BRI"	Adjust "C-BRI" line to +120
			TP6130 (42WS90E) TP6138 (42WS90E2)	Adjust "U-COL" line to obtain 900 mVp-p 
			TP6139 (R-OUT)	Adjust "BRIHT" line to obtain 600mV DC 
			TP6140 (B-OUT) TP6141 (G-OUT)	Check that Pedestal level is 600 mV, if not perform adjustment of sub-brightness
	SERVICE MODE "D-CONTROL SECAM" menu		TP6139 (R-OUT)	Adjust "CONT" line to obtain 1.8Vp-p 
			TP6140 (B-OUT) TP6141 (G-OUT)	Check that Pedestal level is 1.8Vp-p, if not perform adjustment of sub-contrast
	SERVICE MODE "D-CONTROL SECAM" menu	PAL colour bar test pattern Video input	TP6140 (B-OUT)	Adjust "COLOR" line to obtain a blue level = 1.2Vp-p 

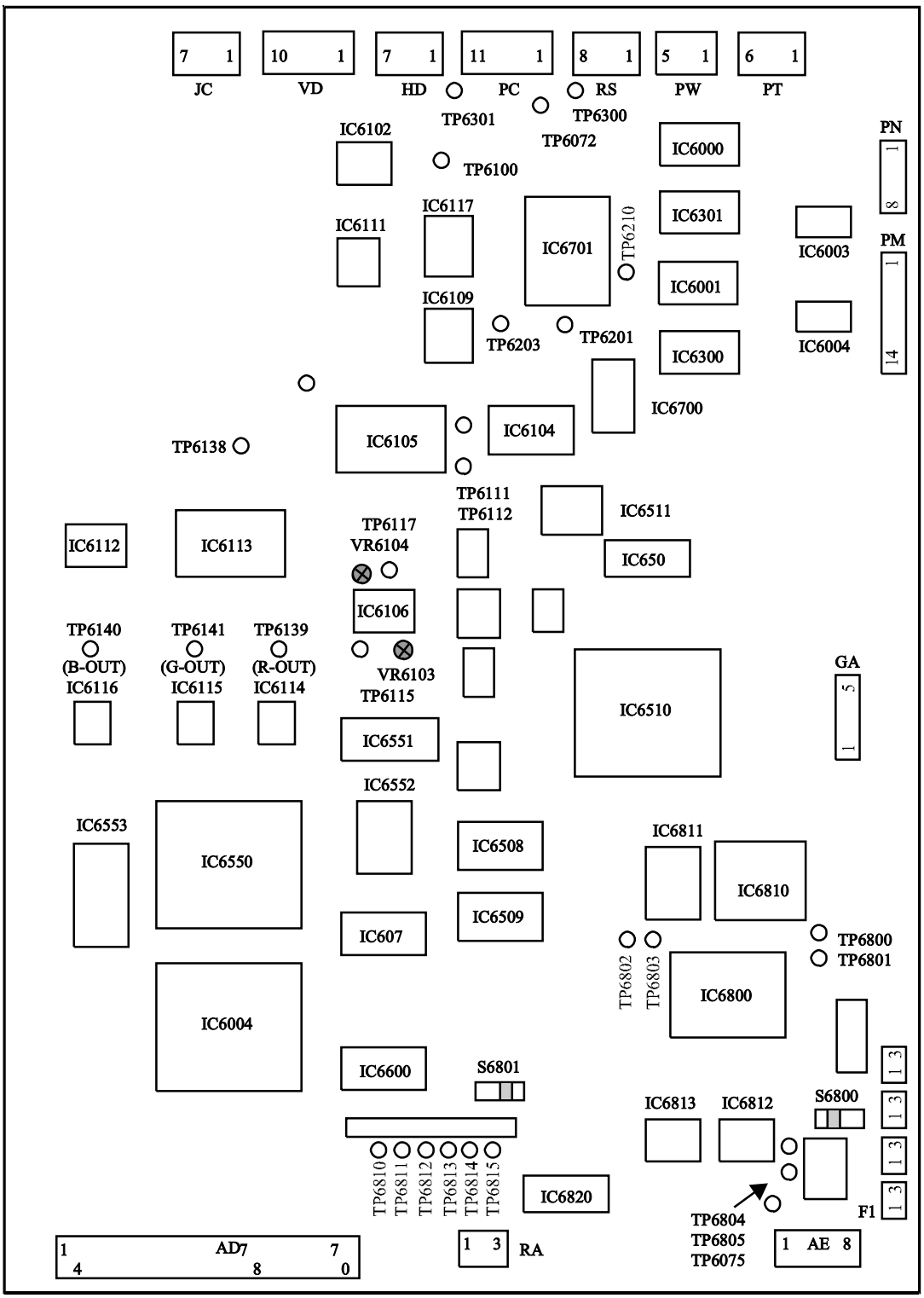
ANALOG Sub-brightness	SERVICE MODE "WHITE BAL-ANCE" menu	Grey scale test pattern white =100% 	 	Adjust "BB" line to obtain a pedestal level at 600mV DC  Adjust "GB" line to obtain a pedestal level at 600mV DC
ANALOG Sub-contrast	SERVICE MODE "WHITE BAL-ANCE" menu	Grey scale test pattern white =100% 	 	Adjust "BD" line to obtain 1.8Vp-p  Adjust "GD" line to obtain 1.8Vp-p
ANALOG Video screen position	SERVICE MODE "POSITION" menu	NTSC test pattern : Select VIDEO input with the Remote Control or keyboard Select "full screen" with the "zoom" key of the Remote Control	If there is any displacement of the display range in the PDP module, select "HP" and "VP" lines, and adjust correctly (42WS90E2 only). Select "H POS" line and adjust  Select "V POS" line and adjust Check that "H PHA" = 3 and "H CLK" = 0 Adjust separate for cinema; 4/3; 16/9 and PAL; SECAM.	
ANALOG RGB screen position	SERVICE MODE "POSITION" menu	NTSC test pattern : Select RGB input with the Remote Control or keyboard Select "full screen" with the "zoom" key of the Remote Control	If there is any displacement of the display range in the PDP module, select "HP" and "VP" lines, and adjust correctly (42WS90E2 only). Select "H POS" line and adjust  Select "V POS" line and adjust  Check that "H PHA" = 3 and "H CLK" = 0 Adjust separate for cinema; 4/3; 16/9 and PAL; SECAM.	
POWER +180V / -180V +80V	-180V ADJ (42WS90E) +180V ADJ (42WS90E2)	No signal input Power switched ON		42WS90E: Adjust "-180V ADJ" to obtain the specified PDP module voltage value +/-1V at TP8 (-180V). This value is indicated on the label pasted on the back of PDP module 42WS90E2: Adjust "+180V ADJ" to obtain the specified PDP module voltage value +/-1V at TP8 (+180V). This value is indicated on the label pasted on the back of PDP module
	+80V ADJ			Adjust "+80V ADJ" to obtain the specified PDP module voltage value +/-1V at TP5 (+80V). This value is indicated on the label pasted on the back of PDP module
		Apply colour bar test pattern to either Video, HD/DVD or VGA input	TP5/TP8	Check that the voltage at TP5 and TP8 does not change. If it changes, perform the previous adjustments again.
POWER +5V	+5V ADJ	Apply colour bar test pattern to either Video, HD/DVD or VGA input		Adjust "+5V ADJ" : V = 5.0 V +/- 0.1 V (42WS90E) V = 5.1 V +/- 0.1 V (42WS90E2)

ADJUSTMENT LOCATION

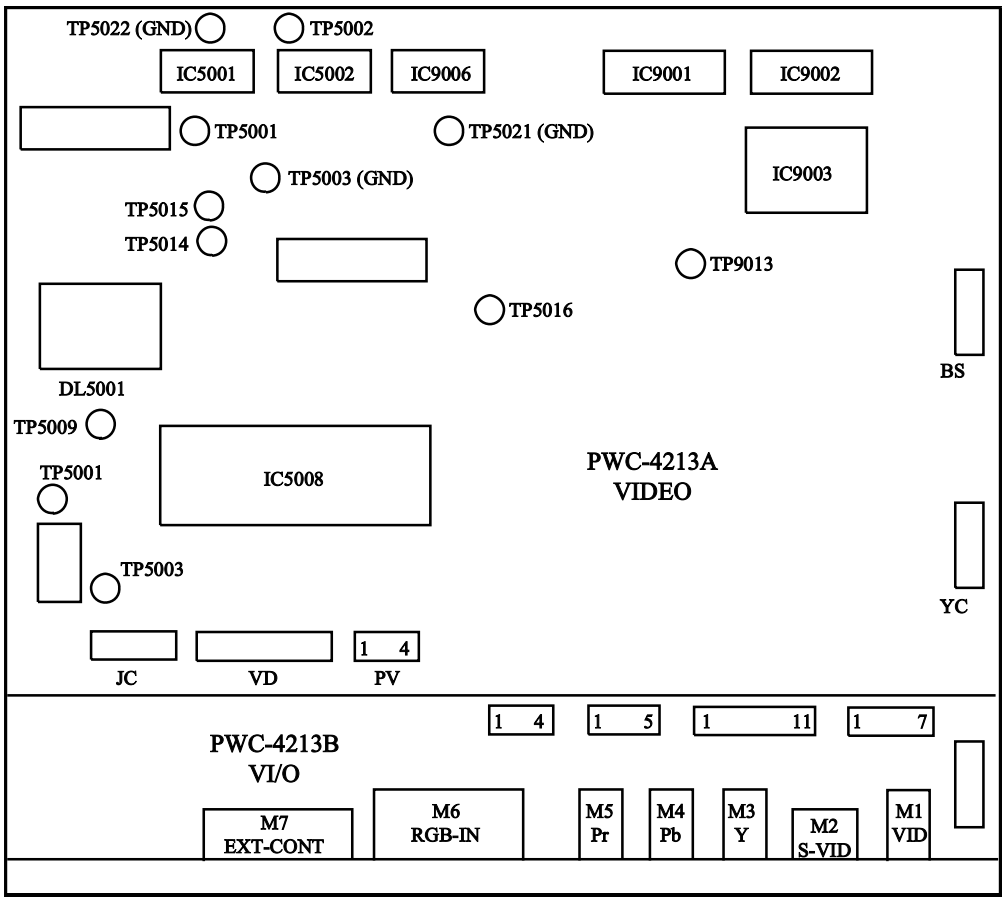
ANALOG module **42WS90E**



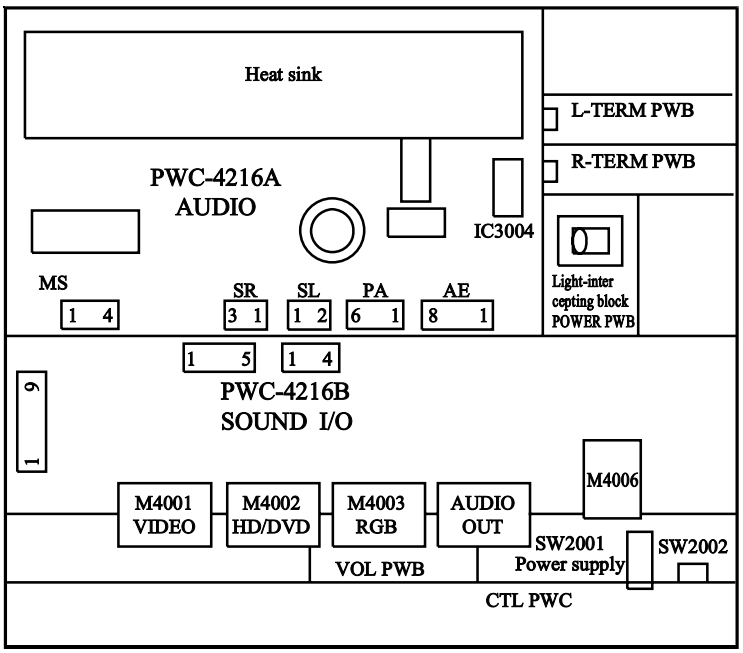
42WS90E2


7 1
JC
10 1
VD
7 1
HD
11 1
PC
8 1
RS
5 1
PW
6 1
PT
TP6301
TP6300
TP6072
TP6100
IC6102
IC6000
PN
IC6111
IC6117
IC6701
TP6210
IC6301
IC6003
PM
IC6001
IC6109
TP6203
TP6201
IC6300
IC6004
IC6700
TP6138
IC6105
IC6104
TP6111
TP6112
IC6511
IC6112
IC6113
TP6117
VR6104
IC650
IC6106
TP6140
(B-OUT)
IC6116
TP6141
(G-OUT)
IC6115
TP6139
(R-OUT)
IC6114
VR6103
TP6115
IC6510
GA
IC6551
IC6552
IC6553
IC6550
IC6508
IC6811
IC6810
IC607
IC6509
TP6800
TP6801
TP6802
TP6803
IC6800
IC6004
IC6600
S6801
IC6813
IC6812
S6800
TP6810
TP6811
TP6812
TP6813
TP6814
TP6815
IC6820
F1
TP6804
TP6805
TP6075
AD7
RA
AE

VIDEO module **42WS90E - 42WS90E2**

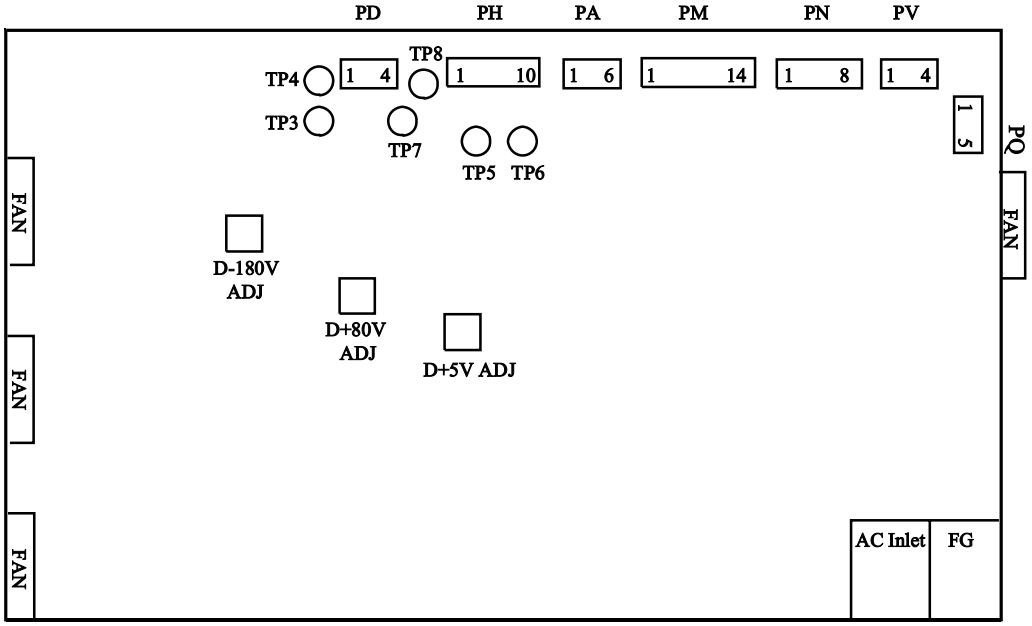


AUDIO module **42WS90E - 42WS90E2**

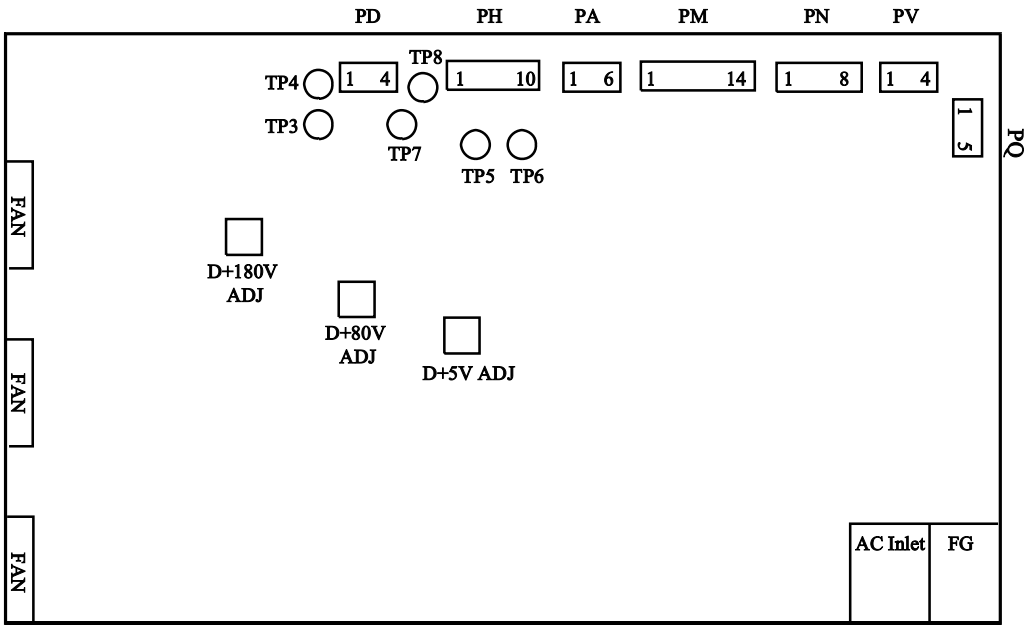


POWER module

42WS90E



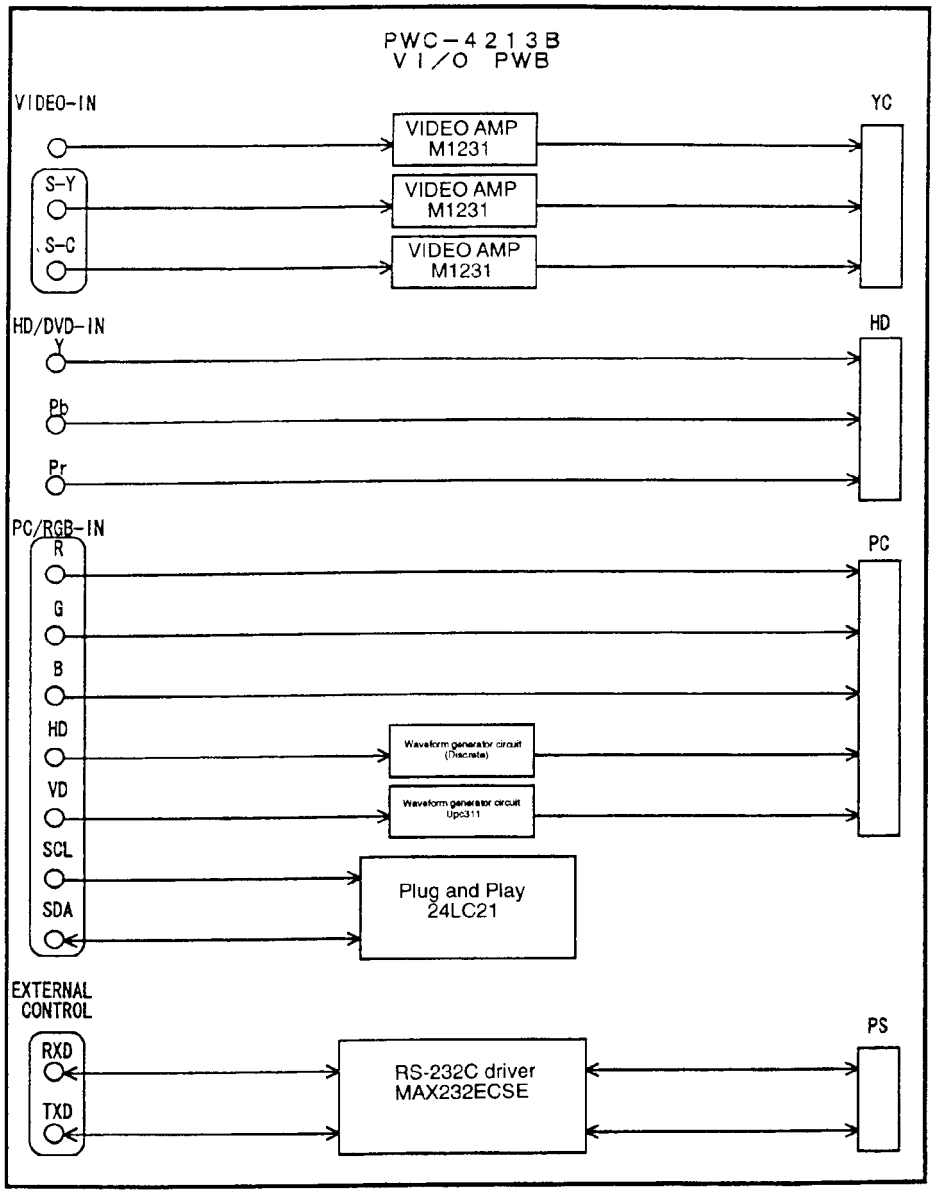
42WS90E2



BLOCK DIAGRAMS

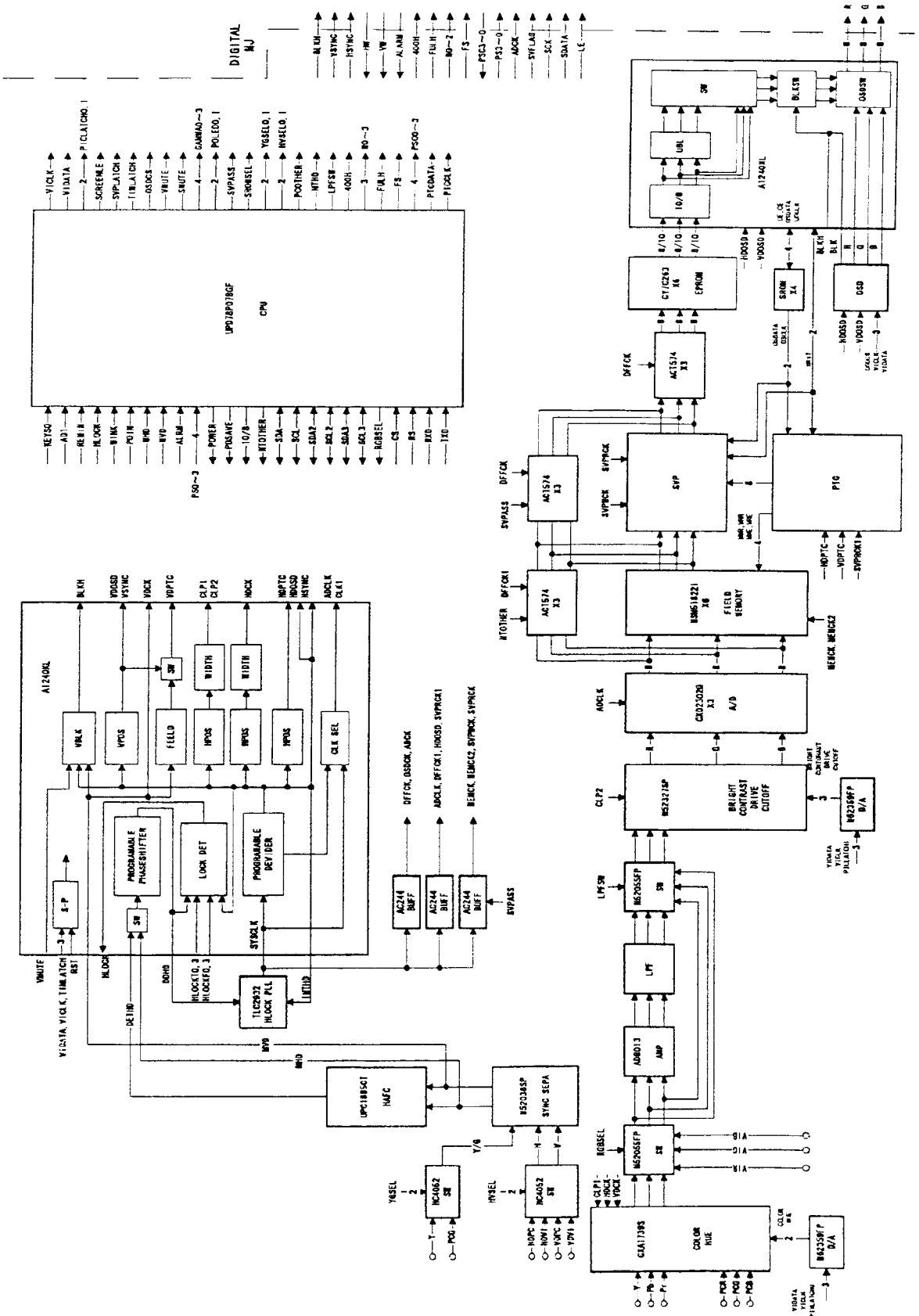
I/O module

42WS90E - 42WS90E2



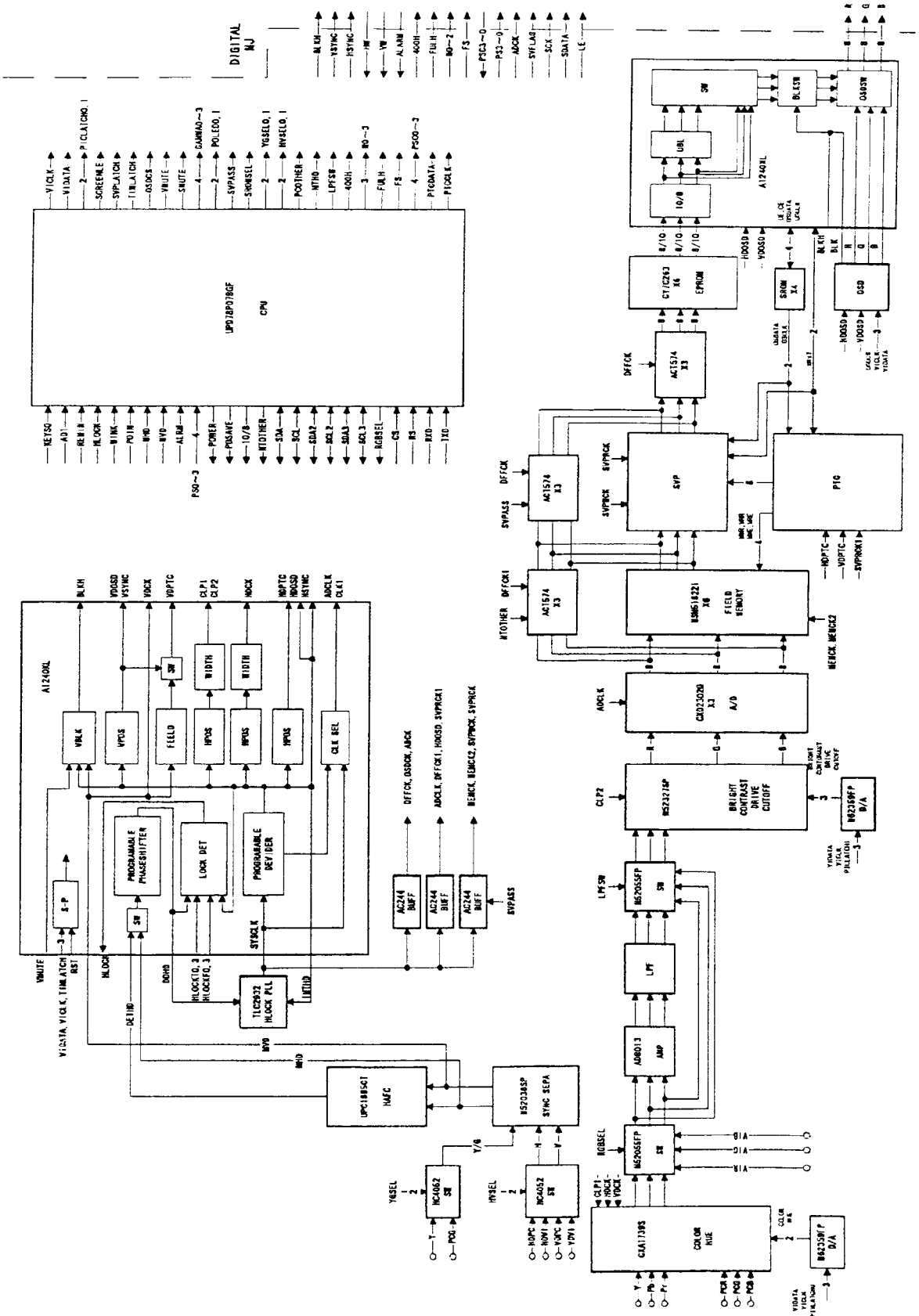
ANALOG module

42WS90E



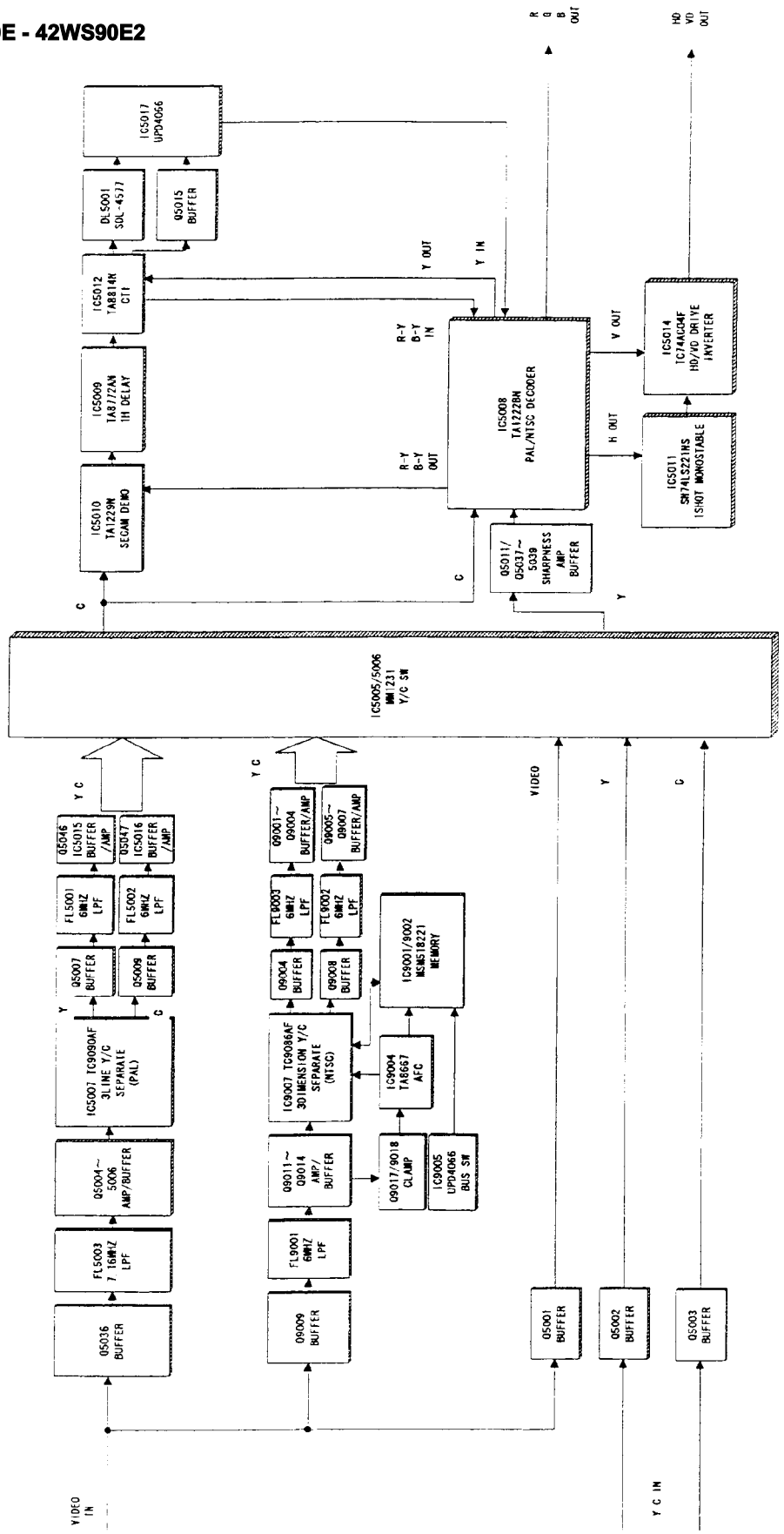
ANALOG module

42WS90E2



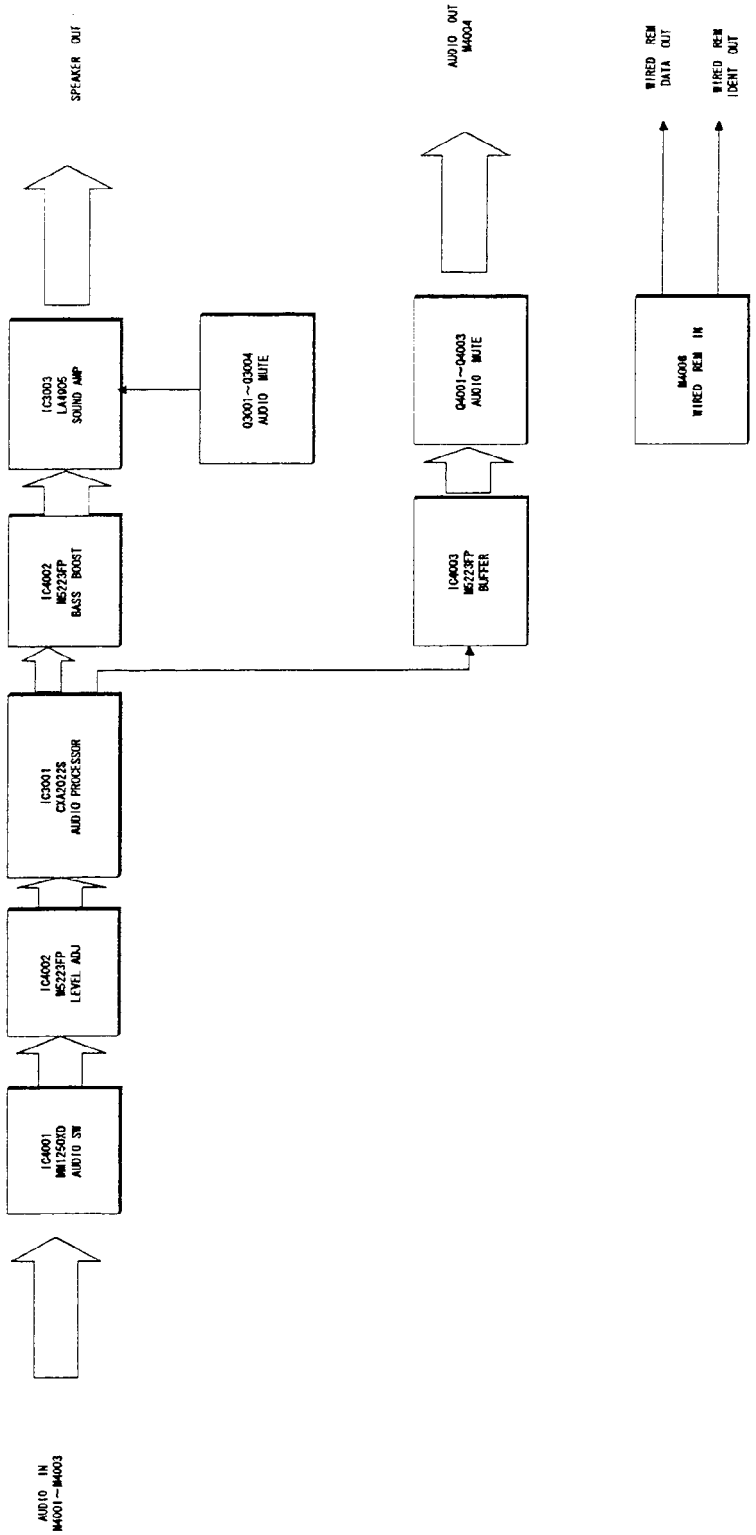
VIDEO module

42WS90E - 42WS90E2



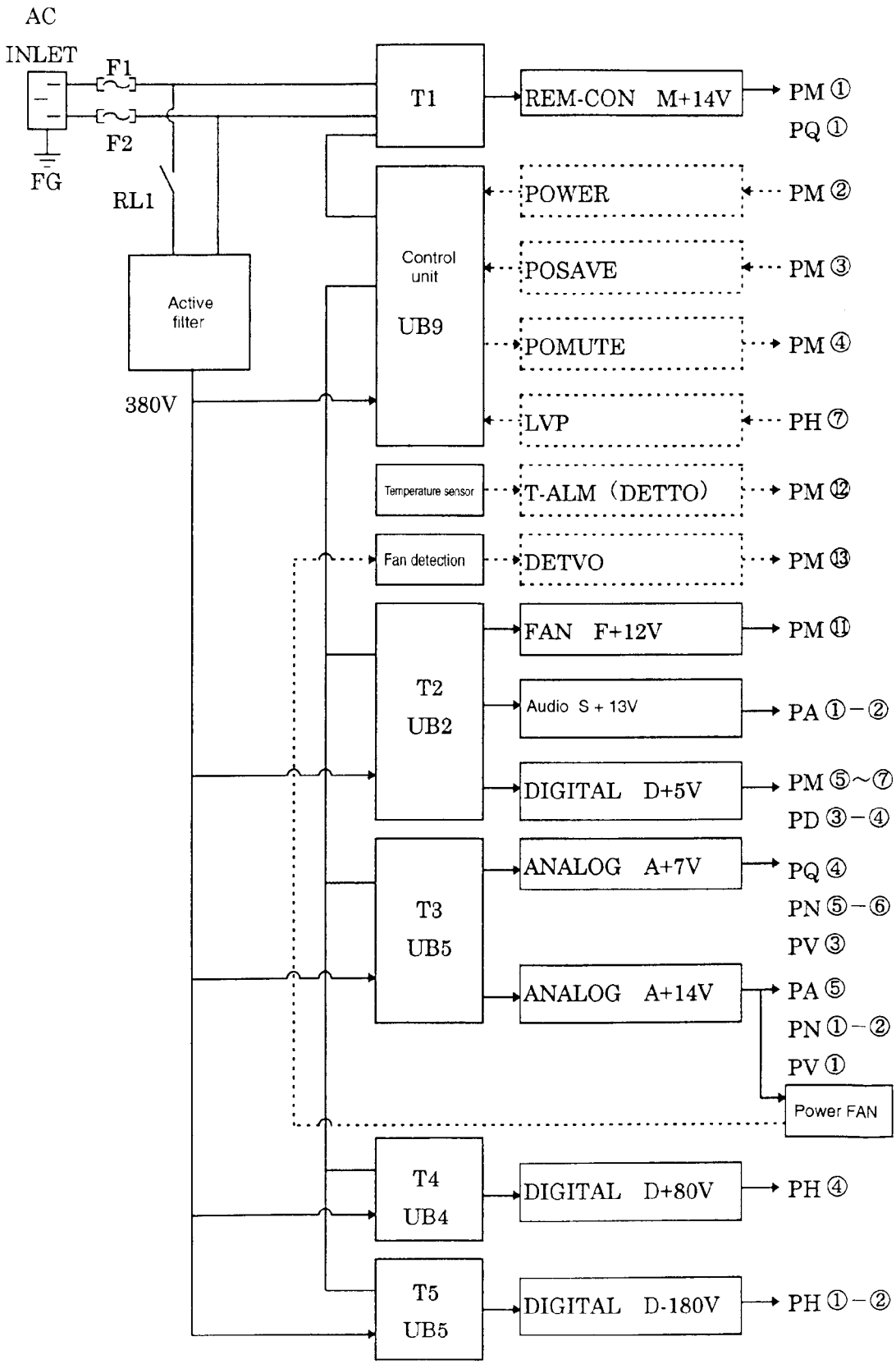
AUDIO module

42WS90E - 42WS90E2



POWER module

42WS90E - 42WS90E2



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